

# Search Report

## STIC Database Tracking Number: 244914

To: JULIE ANNE WATKO

**Location: KNX-8A75** 

Art Unit: 2627

Monday, December 10, 2007

Case Serial Number: 10788863

From: PAMELA REYNOLDS

Location: EIC2600 KNX-8B59 / KNX-8A54 Phone: (571)272-3505

pamela.reynolds@uspto.gov

### Search Notes

Dear Examiner Julie Anne Watko:

Please find attached the search results for 10788863. I used the search strategy I sent you to edit, not hearing from you I proceeded. I searched the standard Dialog files, IEEE, IBM TDBs and the internet.

If you need anything else please let me know.

Thank you.





# 244914

## STIC EIC2600 Search Request Form

Today's Date: 12-517 Date Needed by:	RUSH – SPE signature
Your Name Tulle Ame With	Format for Search Results: PAPER EMAIL
AU <u>427</u> Examiner # <u>776112</u>	Where have you searched? EAST
Room # Phone	NPL where - IEEE, ACM, internet, other
Serial # 10 7888 (3 Priority Date	
applicable. Specify the concepts, synonyms, keys relationship of the concepts to each other. Pleas pertinent claims of the application. ONLY specify  Case serial number: 10788863 Class / Subclass(es): 360/244.8 Earliest Priority Filing Date: 02/27/2004 Format preferred for results: E-mail Attachments: No attachment. Search Topic Information:  I am looking for a material, having a high modulus 10 GPa and a damping capacity > 0.02 preferably strouse in a disk drive (disc drive, hard drive, HDD) head (load beam, gimbal). 1. (Currently Amended) A head component having a front end and a rear end; a hinge component for connecting to an actuation arm; and a main beam section for carrying a transducing head; we first structural damping material having a modulus of gigapascals and a damping capac.jt¥ greater than component comprises a second structural damping material component comprises a second structural damping material damping damp	e attach a copy of the backgound, abstract, and ring CLAIN 1 is not enough.  of elasticity (or coefficient of restitution) > ong enough to support itself, preferably for (slider, transducer, pickup) suspension suspension assembly, comprising: a beam component near the rear end of the beam gimbal component near the front end of the therein the hinge component comprises a felasticity greater than approximately 10 approximately 0.02 and the gimbal
than approximately 10 gigapascals and a damping cap HEADSUSPENSION ASSE-L-Y HAVING AHIGHD ABSTRACT OF THE DISCLOSUI-E-A:head susper assembly in a disc drive -has a beam component :havi component -near the rear end of the beam. componen a gimbal ,component near the -front end of the main I head. At least one Of the hinge component and thegim structural ,dampifig material :having -high stiffness a Special Instructions and Other Comments:	Acity greater than approximately 0.02.  AMPING HIGH STIFf. ESSCOMPONENT  asion assembly for carrying a slider  ang~a front,end and a rear end, a hinge  t for connecting to an actuation means, and  beam section for carrying a transducing  abal component is made from a  and high damping capacity.
I will be working at home until approx'ly Saturday, then, please execute without waiting for my reply. After Mondays and Fridays.	er that, I will only be available to discuss on
Property A. A.	
	Phone
Oate picked up 12-6-07 Date comp	Phone leted 1270-07



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          (c) 2007 RAPRA Technology Ltd
File 335: Ceramic Abstracts/World Ceramics Abstracts 1966-2007/Oct
         (c) 2007 CSA.
Set
        Items
                Description
Sl
         1131
                GIGAPASCAL??
                S1(3N)(10 OR TEN)
S2
           69
         7067
                DAMP? (3N) (CAPACIT? OR CAPABILIT?)
S3
                GREATER (1W) 0 () 02
S4 ·
          587
S5
         5399
                HIGH()STIFFNESS
S6
        10748
              HIGH (3N) DAMP???
        39849
                (MODULUS OR MODULI OR YOUNG) (3N) ELASTICITY
S7
                COEFFICIENT? OR RESTITUTION
S8
      1956257
                (DISC OR DISK OR HARD) (3N) DRIVE?? OR HDD
S9
        46311
                (HEAD OR SLIDER OR TRANSDUCER OR PICKUP) (3N) SUSPENSION
S10
        1115
S11
        3685
                GIMBAL
       11782 DAMPING (3N) MATERIAL??
S12
       346747
                POLYIMIDE? OR POLYAMIDE? OR POLYURETHANE?
S13
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S14
      634428
             EPOXY() RESIN OR POLYETHER() URETHANE? OR POLYETHERURETHANE -
            OR RUBBER OR SILICONE() RUBBER OR POLYVINYLCHLORIDE? OR POLYVI-
            NYL()CHLORIDE? OR POLYBUTADIENE?
      873082 PI OR PVC OR PU
S15
      274795
               STAINLESS()STEEL
S16
      713338
               ALUMINUM
S17
S18
          5
               ZETA()0()02
               QUIET()STEEL OR STAR()SILENT()STEEL
          12
S19
       12166 AU=(SASSINE, J? OR BHATTACHARYA, S? OR HUTCHINSON, A? OR L-
S20
            IMMER, J? OR SASSINE J? OR BHATTACHARYA S? OR HUTCHINSON A? OR
            LIMMER J?)
S21
         402
             LOAD()BEAM
S22
           n
               S2 AND (S4 OR S18)
               S2 AND S7
S23
           3
               RD S23 (unique items)
          3
S24
          64
               S9 AND S10 AND S11
S25
          0 S25 AND (S3 OR S12)
S26
          1 S25 AND S5
S27
          1 S27 NOT S24
S28
               S20 AND (S3 OR S6 OR S12)
          0
S29
          0
               S20 AND S1
S30
               S20 AND S13:S15
        311
S31
         0
               S31 AND S16
S32
         2 S31 AND S17
S33
         2 RD S33 (unique items)
S34
               S34 NOT (S27 OR S24)
S35
          2
          7 S2 AND S8
S36
          7 S36 NOT (S34 OR S27 OR S24)
S37
          4 RD S37 (unique items)
S38
S39
          4 RD S18
                      (unique items)
          12 RD S19 (unique items)
S40
               S40 NOT (AUTOMOBILE? OR CAR?? OR AUTOMOTIVE)
           2
S41
        1108 S12 AND S13:S15
S42
               S42 AND (S9 OR S10 OR S11)
S43
           4
           4
               S43 NOT (S36 OR S34 OR S27 OR S24)
S44
          4 RD S44 (unique items)
S45
               S7 AND S8
        3970
S46
               S46 AND (S3 OR S6 OR S12 OR S5)
        29
S47
         29
               S47 NOT (S43 OR S36 OR S34 OR S27 OR S24)
S48
               S48 NOT PY=>2005
S49
          26
               S5 AND S6 AND (S9 OR S10 OR S11)
S50
          1
               S50 NOT (S47 OR S43 OR S36 OR S34 OR S27 OR S24)
S51
```

24/3,K/1 (Item 1 from file: 6)

DIALOG(R) File 6:NTIS

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1690064 NTIS Accession Number: N92-33666/8

Electron-Beam Processing of Advanced Composites

(Final Report)

Saunders, C. B.; Lopata, V. J.; Kremers, W.; Mcdougall, T. E.; Tateishi, M.

Atomic Energy of Canada Ltd., Pinawa (Manitoba).

Corp. Source Codes: 003443000; A7909905 Report No.: DREP-91-29; CTN-92-60595

Dec 91 29p

Languages: English

Journal Announcement: GRAI9303; STAR3024

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A03/MF A01

... were measured. The flexural moduli of the composites were found to be as much as 10 gigapascals higher when using high dose rate EB curing than low dose rate x-rays. The...

Descriptors: \*Acrylates; \*Curing; \*Electron beams; \*Resin matrix composites; Glass transition temperature; Modulus of elasticity

24/3,K/2 (Item 1 from file: 99)

DIALOG(R) File 99: Wilson Appl. Sci & Tech Abs (c) 2007 The HW Wilson Co. All rts. reserv.

2544426 H.W. WILSON RECORD NUMBER: BAST98066063

Ultrasonic shear wave velocities of MgSiO3 perovskite at 8 GPa and 800 K and lower mantle composition

Sinelnikov, Yegor D; Chen, Ganglin; Neuville, Daniel R

Science v. 281 no5377 (July 31 1998) p. 677-9

DOCUMENT TYPE: Feature Article ISSN: 0036-8075

...ABSTRACT: minus] 0.4 and (dG/dT)p = -2.9 [plus or minus] 0.3 [times] 10 -2 gigapascals per kelvin. Combining these derivatives with the derivatives that were measured for the bulk modulus...

DESCRIPTORS: ... Modulus of elasticity --;

24/3,K/3 (Item 2 from file: 99)

DIALOG(R) File 99: Wilson Appl. Sci & Tech Abs (c) 2007 The HW Wilson Co. All rts. reserv.

2052333 H.W. WILSON RECORD NUMBER: BAST94065276

Strength of diamond

Weidner, Donald J; Wang, Yanbin; Vaughan, Michael T

Science v. 266 (Oct. 21 1994) p. 419-22

DOCUMENT TYPE: Feature Article ISSN: 0036-8075

ABSTRACT: The yield strength of diamond is measured under a pressure of 10 gigapascals at temperatures up to 1550[degree]C by the analysis of x-ray peak shapes...

DESCRIPTORS: ... Modulus of elasticity --;

?

28/3,K/1 (Item 1 from file: 95) DIALOG(R) File 95: TEME-Technology & Management (c) 2007 FIZ TECHNIK. All rts. reserv.

#### 01038362 E96100559212

Development of a magnetic head suspension system for high-speed seeking performance

(Entwicklung einer magnetischen Kopf-Aufhaengung fuer hohe Suchgeschwindigkeiten bei Festplatten) Utsunomiya, M; Hashimoto, M; Kajitani, H NEC Research and Development, v37, n3, pp369-381, 1996

Document type: journal article Language: English

Record type: Abstract

ISSN: 0547-051X

suspension system for high-speed seeking Development of a magnetic head 1performance

#### ABSTRACT:

...higher areal recording density, together with reliable head-disk interface, a novel high performance magnetic head suspension system has been developed. The new suspension consists of a spiral-shaped gimbal spring and a load beam with reverse rails. The characteristics of the developed suspension system...

...numerical simulations and experiments. It has been confirmed that an ideal suspension model shows both high stiffness for high-speed seek motion and compliance for constant flying height. Dynamic analysis for the

DRIVES ; MAGNETIC HEADS; MOUNTING DESCRIPTORS: HARD DISCS; HARD DISC BRACKET; BIT DENSITY; EXPERIMENTAL PLANTS; EXPERIMENTAL RESULTS; THEORETICAL RESULT; NUMERICAL METHOD; COMPUTERIZED...

35/3,K/1 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2007 The Thomson Corp. All rts. reserv.

01554430 Genuine Article#: HG901 No. References: 53

Title: STUDIES ON BIS(CATECHOLATO) IRON(III) COMPLEXES - STRUCTURE AND BONDING IN MEMBERS OF THE FE(BPY)(CL4SQ)(CL4CAT)/FE(BPY)(CL4CAT)2-REDOX COUPLE

Author(s): DING ZR; BHATTACHARYA S; MCCUSKER JK; HAGEN PM; HENDRICKSON DN; PIERPONT CG

Corporate Source: UNIV COLORADO, DEPT CHEM & BIOCHEM/BOULDER//CO/80309; UNIV COLORADO, DEPT CHEM & BIOCHEM/BOULDER//CO/80309; UNIV CALIF SAN DIEGO, DEPT CHEM/LA JOLLA//CA/92093

Journal: INORGANIC CHEMISTRY, 1992, V31, N5 (MAR 4), P870-877 Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Author(s): DING ZR; BHATTACHARYA S; MCCUSKER JK; HAGEN PM; HENDRICKSON DN; PIERPONT CG

...Abstract: related chromium series. A feature of interest in this analysis is that while the catecholate pi -levels of Fe(bpy)(Cat)2-lie lower in energy than the metal 3d levels...

...Research Fronts: 001 (DISSOLUTION KINETICS OF MINERALS; COORDINATION CHEMISTRY AT THE SOLID WATER INTERFACE; SEMIQUINONE COMPLEXES; AMORPHOUS ALUMINUM HYDROXIDE; ION ADSORPTION)

90-3473 001 (TRANSFERRIN RECEPTOR EXPRESSION; IRON ACQUISITION; OUTER-MEMBRANE PROTEINS IN...

35/3,K/2 (Item 1 from file: 99)
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs
(c) 2007 The HW Wilson Co. All rts. reserv.

1337553 H.W. WILSON RECORD NUMBER: BAST96030790

MS sealants: a comparative study of performance properties

Hutchinson, Allan ; Pagliuca, Antonio
Adhesives Age v. 39 (Apr. '96) p. 16-18+

DOCUMENT TYPE: Feature Article ISSN: 0001-821X

#### Hutchinson, Allan;

...ABSTRACT: the most difficult movement applications are evaluated. In particular, the performances of a one-part polyurethane, a neutral cure silicone, and a new technology MS sealant were compared. The MS Polymer...

...silyl-terminated polyether, was the MS sealant. The 3 sealants were analyzed on an anodized **aluminum** substrate and a cement mortar concrete substrate. The results of the tests indicated that the...

38/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

08292949 INSPEC Abstract Number: A2002-14-6630H-006

Title: Protonic diffusion in high-pressure ice VII

Author(s): Katoh, E.; Yamawaki, H.; Fujihisa, H.; Sakashita, M.; Aoki, K. Author Affiliation: Nat. Inst. of Adv. Ind. Sci. & Technol., Tsukuba, Japan

Journal: Science vol.295, no.5558 p.1264-6

Publisher: American Assoc. Adv. Sci,

Publication Date: 15 Feb. 2002 Country of Publication: USA

CODEN: SCIEAS ISSN: 0036-8075

SICI: 0036-8075 (20020215) 295:5558L.1264:PDHP;1-X

Material Identity Number: S015-2002-008

U.S. Copyright Clearance Center Code: 0036-8075/02/\$8.00

DOI: 10.1126/science.1067746

Language: English

Subfile: A

Copyright 2002, IEE

...Abstract: that protonic diffusion will dominate at high pressures in ice. We measured the protonic diffusion coefficient for the highest temperature molecular phase of ice VII at 400 kelvin over its entire...
...from 10/sup -17/ to 10/sup -15/ square meters per second at pressures of 10 to 63 gigapascals. The diffusion coefficients extrapolated to high temperatures close to the ice VII melting curve were less by a...
...Identifiers: diffusion coefficients;

38/3,K/2 (Item 1 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management
(c) 2007 FIZ TECHNIK. All rts. reserv.

02073017 20060308589

Optical properties of wurtzite and rock-salt ZnO under pressure
Segura, A; Sans, JA; Manjon, FJ; Mari, B; Munoz, A; Herrera-Cabrera, MJ
Instituto de Ciencia de Materiales, Universidad de Valencia, ES
Microelectronics Journal, v36, n10, pp928-932, 2005
Document type: journal article Language: English
Record type: Abstract
ISSN: 0959-8324

ABSTRACT:

...2GPa. The absorption tail of the fundamental gap, as measured in monocrystals, exhibits a pressure coefficient of 24.5+or-2meV/GPa. The evolution under pressure of the full absorption edge of the wurtzite phase is studied with thin film samples, yielding a slightly lower pressure coefficient (23.0+or-0.5meV/GPa for the A-B exciton). Rock-salt ZnO is... IDENTIFIERS: DICHTEFUNKTIONSTHEORIE; BERECHNUNG ELEKTRONISCHER STRUKTUREN; 10 GIGAPASCAL BEREICH; Elektronische Struktur; Energieluecke

38/3,K/3 (Item 2 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management
(c) 2007 FIZ TECHNIK. All rts. reserv.

01766177 20030511162

Pressure dependence of photoluminescence spectra of self-assembled InAs/GaAs quantum dots

Manjon, FJ; Goni, AR; Syassen, K; Heinrichsdorff, F; Thomsen, C Max-Planck-Inst. f. Festkoerperforsch., Stuttgart, D Physica Status Solidi (B) - Basic Research, v235, n2, pp496-500, 2003 Document type: journal article Language: English Record type: Abstract ISSN: 0370-1972

#### ABSTRACT:

...state (65 meV/GPa) and of the new broad band (69 meV/GPa). These pressure coefficients0 are 20% and 40% lower than those reported for dots of less than half the...

...for the wetting layer, respectively. Our results point to a systematic reduction of the pressure **coefficient** of the InAs QDs with the increase of the dot height.

...DESCRIPTORS: COMPOUNDS; PHOTOLUMINESCENCE; POLISHING; SEMICONDUCTOR QUANTUM DOTS; SPECTRAL LINE SHIFT; WETTING; PRESSURE DEPENDENCE; HYDROSTATIC PRESSURE; PRESSURE COEFFICIENT; INDIUM ARSENIDE IDENTIFIERS: HOCHDRUCKEFFEKT; SELBSTMONTAGE; PHOTOLUMINESZENZSPEKTRUM; ZWEIDIMENSIONALE MONOLAGE; 10 GIGAPASCAL BEREICH; Anregungszustand; Galliumarsenid

38/3,K/4 (Item 3 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management
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#### 01766175 20030511164

Electronic structure and optical properties of CdTe rock-salt high pressure phase

Guder, HS; Gilliland, S; Sans, JA; Segura, A; Gonzalez, J; Mora, I; Munoz, V; Munoz, A

Dept. de Fisica Aplicada, Univ. de Valencia, E Physica Status Solidi (B) - Basic Research, v235, n2, pp509-513, 2003 Document type: journal article Language: English Record type: Abstract

ISSN: 0370-1972

#### ABSTRACT:

...semimetal or a low gap semiconductor. Band filling effects lower the band-to-band absorption coefficient and give rise to a "transparency" range, whose upper energy side is assigned to the direct transition at the Gamma point, on the basis of its pressure coefficient. The shrinking and disappearance of the transparency region, along with a large increase of the...

DESCRIPTORS: ABSORPTION COEFFICIENT; BAND STRUCTURE; CADMIUM COMPOUNDS; 3
5 COMPOUNDS; SEMICONDUCTOR EPITAXIAL LAYERS; OPTICAL TRANSPARENCY;
ULTRAVIOLET SPECTRUM; VISIBLE SPECTRA; ELECTRONIC STRUCTURE; OPTICAL
PROPERTIES; LIGHT ABSORPTION; REFLECTING POWER; LIGHT REFLECTION;
ABSORPTION SPECTRUM; METALLOIDES; PRESSURE COEFFICIENT; PHASE TRANSITION;
CADMIUM TELLURIDE; SOLID SOLID INTERFACE
IDENTIFIERS: DICHTEFUNKTIONSTHEORIE; HOCHDRUCK FESTKOERPERPHASENUMWANDLUNG;
HOCHDRUCKPHASE; FREIER LADUNGSTRAEGER; LADUNGSTRAEGERABSORPTION; 20
GIGAPASCAL BEREICH; 10 GIGAPASCAL BEREICH; Absorptionsgrad;
Bandstruktur

(Item 1 from file: 6) 39/3,K/1 DIALOG(R) File 6:NTIS (c) 2007 NTIS, Intl Cpyrght All Rights Res. All rts. reserv. 1473557 NTIS Accession Number: N89-30007/3 Calculation of Transformed Fraction Using Resistivity Data: A Comparison of Various Conductivity Models Mohan, M.; Singh, A. K. National Aeronautical Lab., Bangalore (India). Corp. Source Codes: 019037000; NC157871 Sponsor: National Aeronautics and Space Administration, Washington, DC. Report No.: PD-MT-8911 May 89 15p Languages: English Journal Announcement: GRAI9003; STAR2724 product from NTIS by: phone at 1-800-553-NTIS (U.S. Order this (703)605-6000 (other countries); fax at (703)321-8547; and customers); email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA. NTIS Prices: PC A03/MF A01 ... zeta, for titanium, as calculated from the different conductivity models lie within 14 percent at zeta = 0 . 02 , 7 percent at zeta = 0.5 and 0.5 percent at zeta = 0.95. The... 39/3,K/2 (Item 2 from file: 6) DIALOG(R)File 6:NTIS (c) 2007 NTIS, Intl Cpyrght All Rights Res. All rts. reserv. 0166933 NTIS Accession Number: AD-677 064/XAB Muon Polarization in Neutral-Kaon(3) Decay (Technical rept) Longo, M. J.; Young, K. K.; Helland, J. A. Michigan Univ Ann Arbor Dept of Physics Corp. Source Codes: 228720 Report No.: TR-33; 03106-33-T Sep 68 69p Journal Announcement: USGRDR6901 this product from NTIS by: phone at 1-800-553-NTIS (U.S. Order customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA. NTIS Prices: PC A04/MF A01 ...ratio zeta = f-/f+ was Re zeta = -1.81 +0.50 or -0.26, Im zeta = -0 . 02 plus or minus .08, Arg (zeta)-pi = 0.6 plus or minus 2.6 deg... 39/3, K/3(Item 1 from file: 34) DIALOG(R)File 34:SciSearch(R) Cited Ref Sci (c) 2007 The Thomson Corp. All rts. reserv. No. References: 65 05509873 Genuine Article#: WD277 Title: The numerical simulation of non-supercell tornadogenesis .1. Initiation and evolution of pretornadic misocyclone circulations along a dry outflow boundary Author(s): Lee BD (REPRINT); Wilhelmson RB Corporate Source: UNIV ILLINOIS, DEPT ATMOSPHER SCI, 105 S GREGORY AVE/URBANA//IL/61801 (REPRINT); UNIV ILLINOIS, NATL CTR SUPERCOMP

APPLICAT/URBANA//IL/61801; UNIV ILLINOIS, DEPT ATMOSPHER SCI/URBANA//IL/61801

Journal: JOURNAL OF THE ATMOSPHERIC SCIENCES, 1997, V54, N1 (JAN 1), P32-60 ISSN: 0022-4928 Publication date: 19970101 Publisher: AMER METEOROLOGICAL SOC, 45 BEACON ST, BOSTON, MA 02108-3693 Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

...Abstract: outflow head, 2) substantial across-front horizontal shear leading to a strong vertical vortex sheet ( zeta > 0 . 02 s(-1)) that evolved into vigorous misocyclone centers, and 3) an environment of neutral or...

39/3,K/4 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal
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16908434 PASCAL No.: 04-0571657

Short-range NN properties in the processes pd rightarrow dp and pd rightarrow (pp) SUP n

Refereed and selected contributions from International Conference on Quark Nuclear Physics, QNP2002, June 9-14, 2002, Juelich, Germany

UZIKOV Yu N; KOMAROV V I; RATHMANN F; SEYFARTH H

ELSTER Charlotte, ed; SPETH Josef, ed; WALCHER Thomas, ed

Kazakh National University, 480078 Almaty, Kazakhstan; Laboratory of Nuclear Problems, Joint Institute for Nuclear Research, Dubna, 141980, Russia; Institut fuer Kernphysik, Forschungszentrum Juelich, 52425 Juelich, Germany

Institute of Nuclear Physics (IKP), Germany; University of Bonn, Bonn, Germany; University of Mainz, Mainz, Germany

QNP2002: Quark Nuclear Physics. International Conference (Juelich DEU) 2002-06-09

Journal: The European physical journal. A, hadrons and nuclei, 2003, 18 (2-3) 317-319

Language: English

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... largely model-independent way. depends on the dynamics of the pd interaction. We find here  ${\tt zeta}$  0 . 02 and show that the smallness of this value may point toward softness of the denteron...?

41/3,K/1 (Item 1 from file: 65)
DIALOG(R)File 65:Inside Conferences

(c) 2007 BLDSC all rts. reserv. All rts. reserv.

00191185 INSIDE CONFERENCE ITEM ID: CN001919878 Finding a Voice for Quiet Steel

Tenley, G.

CONFERENCE: Pipeline conference

PROCEEDINGS OF THE API PIPELINE CONFERENCE, 1993 P: 226-232

American Petroleum Institute, 1993

LANGUAGE: English DOCUMENT TYPE: Conference Papers CONFERENCE SPONSOR: American Petroleum Institute

CONFERENCE LOCATION: Dallas, TX CONFERENCE DATE: Apr 1993 (199304)

Finding a Voice for Quiet Steel

41/3,K/2 (Item 1 from file: 36)
DIALOG(R)File 36:MetalBase

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0004248544 IP Accession No.: 222717

Weldability of a Quiet Steel conductive laminate.

Author: KUO M; ORSETTE C J; DICKINSON R C MSC INC; ROMAN ENGINEERING SERVICES INC

2002

In: Sheet Metal Welding X. Proceedings, Conference, Sterling Heights,
Michigan, 15-17 May 2002. Chairman: M.Karagoulis. Publ: Sterling Heights,
MI 48310, USA; American Welding Society (Detroit Section); 2002. Session 3.
Resistance Spot Weldability. Paper 3.3. 15pp. 8 fig., 8 tab., 16 ref.,
2002

Avail.: Yes

Country of Publication: USA

Language: English

Weldability of a Quiet Steel conductive laminate.

...Abstract: study was carried out to establish a process window for the resistance spot welding of "Quiet Steel ", a vibration-damped steel based laminate system (steel-polymer-steel). Welding was carried out using stacked sheets of Quiet Steel sheets of thickness 1.19-1.21 mm with cold rolled steel sheets of thickness...

45/3,K/1 (Item 1 from file: 8)

DIALOG(R) File 8:Ei Compendex(R)

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09156697 E.I. No: EIP02417129000

Title: Proceedings of SPIE: Smart structures and materials 2002 - Damping and isolation

Author: Agnes, G.S. (Ed.)

Conference Title: Smart Structures and Materials 2002: Damping and

Conference Location: San Diego, CA, United States Conference Date: 20020318-20020320

E.I. Conference No.: 59834

Source: Proceedings of SPIE - The International Society for Optical Engineering v 4697 2002. 409p

Publication Year: 2002

CODEN: PSISDG ISSN: 0277-786X

Language: English

Title: Proceedings of SPIE: Smart structures and materials 2002 - Damping and isolation

Abstract: The proceedings contains 39 papers from the conference on SPIE: Smart Structures and Materials 2002- Damping and Isolation. The topics discussed include: whole-spacecraft shock isolation system; revised modal strain energy...

...analysis of viscoelastic damping treated structures; dynamics analysis of constrained layer damping treated covers for hard disk drives; dynamically tuned shroud for gun barrel vibration attentuation; remote dynamic absorber; control of vibration and...

...auxetic core; optimum design of hybrid piezoelectric damping system for flexible structures; and characteristics of rubber used in seismic isolation by digital and thermal image analysis. (Edited abstract)

Identifiers: Spacecraft vibration protection; Adaptive inflatable tubes; Damped structures; Aeroelastic instabilities; Model strain energy methods; Hard disk drives (HDD); Cellular structures; Dynamic vibration absorbers (DVA); EiRev

45/3,K/2 (Item 1 from file: 323)

DIALOG(R)File 323:RAPRA Rubber & Plastics

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00923014

TITLE: NEW NAME REFLECTS BFS TECH CENTER'S DIVERSITY

AUTHOR(S): Meyer B

SOURCE: Rubber and Plastics News; 34, No.6, 18th Oct.2004, p.6

ISSN: 0300-6123

JOURNAL ANNOUNCEMENT: 200412 RAPRA UPDATE: 200423

DOCUMENT TYPE: Journal Article

LANGUAGE: English SUBFILE: (R) RAPRA

...ABSTRACT: the centre, other areas include materials for air springs, applications of rheological fluids and high-damping materials used in Japan in DVD and compact disc drives for cars.

DESCRIPTORS: AIR SPRING; COMPANIES; COMPANY; DAMPING; DEVELOPMENT; DISC DRIVE; DISK DRIVE; ELASTOMER; ENERGY ABSORPTION; HYSTERESIS; MECHANICAL PROPERTIES; NANOTECHNOLOGY; NON-TIRE; NON-TYRE; PRODUCT DEVELOPMENT; PROPERTIES; RESEARCH; ROLLING RESISTANCE; RUBBER; SPRING

#### ; TIRE; TYRE; VIBRATION DAMPING

45/3,K/3 (Item 2 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics
(c) 2007 RAPRA Technology Ltd. All rts. reserv.

00552117

TITLE: DURABLE URETHANE

SOURCE: Rubber World; 212, No.1, April 1995, p.54

ISSN: 0035-9572

CODEN: RVBWAQ JOURNAL ANNOUNCEMENT: 199508 RAPRA UPDATE: 199515

DOCUMENT TYPE: Journal Article

LANGUAGE: English SUBFILE: (R) RAPRA

ABSTRACT: It is briefly reported that Isoloss HD **PU** elastomer, a proprietary **damping** and isolation **material**, can effectively control unwanted mechanical energy in applications that range from shock control in miniature 2.5 inch computer **disc drives** to noise and vibration reduction in industrial assembly equipment. Isoloss HD from E-A-R...

...SUBJECT HEADING (RAPRA): PU elastomers

DESCRIPTORS: ASSEMBLY; BUMPER; BUSHING; COMPANY; COMPRESSION SET; COMPUTER; CREEP RESISTANCE; DATA; DIMENSIONAL STABILITY; DISC DRIVE; ELASTOMER; ENERGY ABSORPTION; ENVIRONMENTAL RESISTANCE; GASKET; GROMMET; INDUSTRIAL APPLICATION; LOADING; MACHINERY; MECHANICAL PROPERTIES; MEDICAL EQUIPMENT; MOUNTING; NOISE REDUCTION; OFFICE EQUIPMENT; POLYURETHANE ELASTOMER; PRODUCT ANNOUNCEMENT; PU ELASTOMER; RESILIENCE; 1RUBBER; SANDWICH; SEAL; SHORT ITEM; STRENGTH; TEMPERATURE RANGE; VIBRATION DAMPING; VIBRATION ISOLATION

45/3,K/4 (Item 3 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics
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00548222

TITLE: URETHANE

SOURCE: Rubber World; 311, No.6, March 1995, p.64

ISSN: 0035-9572

CODEN: RVBWAQ JOURNAL ANNOUNCEMENT: 199507 RAPRA UPDATE: 199512

DOCUMENT TYPE: Journal Article

LANGUAGE: English SUBFILE: (R) RAPRA

ABSTRACT: It is briefly reported that E-A-R Specialty Composites has introduced Isoloss HD PU elastomer, a proprietary damping and isolation material that is said to effectively control unwanted mechanical energy in applications that range from shock control in miniature 2.5-inch computer disc drives to noise and vibration reduction in industrial assembly equipment. Isoloss HD urethane is said to...

Α.,

...SUBJECT HEADING (RAPRA): PU elastomers

...DESCRIPTORS: BUSHING; BUSINESS MACHINE; CHEMICAL RESISTANCE; COMPANY; COMPLIANCE; COMPRESSION SET; COMPUTER; CREEP RESISTANCE; DATA; DIMENSIONAL STABILITY; DISC DRIVE; ELASTOMER; ENERGY ABSORPTION; GASKET; GROMMET; INDUSTRIAL APPLICATION; ISOLATOR; MACHINERY; MECHANICAL PROPERTIES; MEDICAL EQUIPMENT; OZONE RESISTANCE; POLYURETHANE ELASTOMER; PRODUCT ANNOUNCEMENT; PU ELASTOMER;

49/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

05920074 INSPEC Abstract Number: A9509-8140J-006

Title: Physical and mechanical properties and the structure of as-quenched Ti-Ni-Al alloys

Author(s): Matlakhova, L.A.; Fedotov, S.G.; Pekhtereva, N.N.

Journal: Izvestiya Akademii Nauk SSSR, Metally no.3 p.108-13

Publication Date: 1994 Country of Publication: Russia

CODEN: IZNMAQ ISSN: 0568-5303

Translated in: Russian Metallurgy no.3 p.91-5
Publication Date: 1994 Country of Publication: USA

CODEN: RMLYAQ ISSN: 0036-0295

U.S. Copyright Clearance Center Code: 0036-0295/94/\$50.00

Language: English

Subfile: A

Copyright 1995, IEE

Abstract: The dependence of the modulus of normal elasticity E, shear modulus G, and logarithmic damping coefficient Q on the concentration and structure of as-quenched alloys of the system Ti-Ni...

... concentration is given in weight %). The alloys with the martensite alpha '(a")-phase structure display high damping properties. The beta-phase considerably deteriorates these properties. Addition of Al up to 3% expands...

... Identifiers: logarithmic damping coefficient;

49/3,K/2 (Item 2 from file: 2)

DIALOG(R) File 2: INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

05912754 INSPEC Abstract Number: A9508-8140N-026

Title: Fatigue effect on the dynamic properties of CFRP composites

Author(s): Vellios, L.; Kostopoulos, V.; Paipetis, S.A. Author Affiliation: Appl. Mech. Lab., Patras Univ., Greece

Journal: Advanced Composites Letters vol.3, no.4 p.145-50

Publication Date: 1994 Country of Publication: UK

CODEN: ACLEEJ ISSN: 0963-6935

Language: English

Subfile: A

Copyright 1995, IEE

Abstract: Damage developing during fatigue of composite laminates affects both dynamic modulus of elasticity and damping coefficient of the material. It has been shown that the effect of fatigue on the damping coefficient is of particular importance. The damping variation could be used to characterise the damage state...

... relating damage with damping was developed to correlate damage development to mechanical response. The damping coefficients of the composite of the fatigue test were measured at various stages, using the flexural...

49/3,K/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

0000610532 INSPEC Abstract Number: 1963A01216

Title: The damping capacity of strontium

Author(s): Dashkovskii, A.I.; Savitskii, E.M.

Journal: Fizika Metallov i Metallovedenie 11 5 p.811-812

Publication Date: May 1961 Country of Publication: USSR

Translated in: Physics of Metals and Metallography p.153-154

Publication Date: 1961 Country of Publication: UK

Language: Russian

Subfile: A

Copyright 2004, IEE

Title: The damping capacity of strontium

Abstract: Experiments are reported on the temperature dependence of the damping capacity (I) and shear modulus of elasticity (II) for strontium rods (3 mm diameter and 280 mm long; containing as impurities Fe

... increases. At 620(deg), I drops abruptly and II is also reduced, while the temperature coefficient varies. On cooling, the curves for I and II have exactly the same course as...

#### 49/3,K/4 (Item 1 from file: 6)

DIALOG(R) File 6:NTIS

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1612636 NTIS Accession Number: AD-A241 311/0

Proceedings of Damping '91, Held in San Diego, California on February 13-15, 1991. Volume 1

(Final rept. Feb 89-Feb 91)

Wright Lab., Wright-Patterson AFB, OH.

Corp. Source Codes: 101228000; 422730

Report No.: WL-TR-91-3078-VOL-1

Aug 91 393p

Languages: English Document Type: Conference proceeding

Journal Announcement: GRAI9203

See also Volume 2, AD-A241 312.

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NTIS Prices: PC A17/MF A04

... test article), Active damping of a cantilever beam, and Large space structure passive electrodynamic dampers; Damping materials and measurements; and Viscoelastic materials.

Identifiers: \*Symposia; Beams(Structural); Modulus of elasticity; Composite structures; Trusses; Damping materials; Efficiency; Viscoelastic materials; Optimization; Coefficients; Foreign technology; Japan; NTISDODXA

#### 49/3,K/5 (Item 2 from file: 6)

DIALOG(R) File 6:NTIS

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1580438 NTIS Accession Number: AD-A233 197/3

Passive Vibration Damping

(Final technical rept. 1 Jan-31 Dec 90)

Kurtz, S. K.; Yoshikawa, S.

Pennsylvania State Univ., University Park. Materials Research Lab.

Corp. Source Codes: 009222082; 220750

Jan 91 48p

Languages: English

Journal Announcement: GRAI9116

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NTIS Prices: PC A03/MF A01

... 70 to 90 GPa measured using an electrical resonance technique. In order to utilize piezoelectric damping effect for structural materials, PZT with polymer or metal matrix have also been studied. Using PZT or PbTiO3 powders...

... ceramic-polymer 0-3 connectivity composites have been manufactured and evaluated, though extremely low coupling **coefficient** (k2) of these composites made them poor piezoelectric dampers. A PZT toroid embedded in solder...

Descriptors: \*Ceramic materials; \*Metal matrix composites; Coefficients; Construction materials; Coupling(Interaction); Damping; Electrical properties; External; Matrix materials; Mechanical impedance; Metals; Modulus of elasticity; Optimization; Passive systems; Piezoelectric effect; Piezoelectric materials; Resistors; Resonance; Sampling; Soldering; Vibration

Identifiers: \*Passive vibration damping; \*Piezoelectric damping; Polymer matrix; Electromechanical coupling coefficient; Zirconium oxides; Polymer matrix composites; NTISDODXA

49/3,K/6 (Item 3 from file: 6)

DIALOG(R) File 6:NTIS

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1257734 NTIS Accession Number: AD-A169 826/5

New Materials for Spacecraft Stability and Damping - A Feasibility Study (Final technical rept. 1 Oct 83-30 Sep 84)

Mackenzie, J. D.

California Univ., Los Angeles. Dept. of Materials Science and Engineering.

Corp. Source Codes: 005420219; 406237

Report No.: AFOSR-TR-86-0308

Nov 85 52p

Languages: English

Journal Announcement: GRAI8622

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A04/MF A01

... hollow and oval glass fibers and hollow fiber-glass-polymer composites. The low temperature expansion coefficients, elastic moduli and damping constants were measured. Recommendations are made for further research and development...

Descriptors: \*Glass fibers; \*Glass; Coefficients; Constants; Damping; Expansion; Low temperature; Modulus of elasticity; Spacecraft; Stability; Structural members; Structures; Ceramic materials; Copper; Glass

reinforced plastics; Thermal expansion; Temperature coefficients; Spacecraft components

Identifiers: Aluminosilicate glass; Hollow fibers; Oval fibers; Damping materials; Engineering materials; NTISDODXA

49/3,K/7 (Item 4 from file: 6)

DIALOG(R) File 6:NTIS

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1225023 NTIS Accession Number: N86-15676/7

Statisch en Dynamisch Materiaal-Model T.B.V. Elasto-Hydrodynamische Lager Berekeningen (Static and Dynamic Material Model for Elastohydrodynamic Bearing Calculations)

Seinstra, S.

Instituut TNO voor Werktuigkindige Constructies, Delft (Netherlands).

Corp. Source Codes: 076036000; IP871787

Sponsor: National Aeronautics and Space Administration, Washington, DC.

Report No.: IWECO-5076503; TDCK-79878

Dec 84 61p Languages: Dutch

Journal Announcement: GRAI8608; STAR2406

Text in Dutch.

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NTIS Prices: PC A04/MF A01

... the dynamic behavior of rubber and synthetic bearing race materials were investigated. Stiffness and damping coefficients of water lubricated propeller shaft bearings with elastic race are insufficiently known. Based on a literature review, nonlinear elasticity, high damping, and incompressible behavior is assessed. Clear differences between static and dynamic properties are noted. A dynamic model using a complex dynamic modulus of elasticity is described.

Descriptors: \*Bearings; \*Elastohydrodynamics; \*Epoxy resins; Mathematical models; Rubber; Dynamic modulus of elasticity; Propellers; Resin matrix composites; Stiffness; Vibration damping

49/3,K/8 (Item 5 from file: 6)

DIALOG(R) File 6:NTIS

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0356672 NTIS Accession Number: AD-752 317/XAB

Damping in Porcelain Enamel Coatings

(Summary technical rept. Jun 69-Jun 71)

idharan, P.; Plunkett, R.

Minnesota Univ Minneapolis Dept of Aeronautics and Engineering Mechanics

Corp. Source Codes: 233510

Report No.: AFML-TR-71-193

Jul 72 79p

Journal Announcement: GRAI7302

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A05/MF A01

... as protective and decorative coatings for metal parts. This report describes a study of the damping capability of these coatings at elevated temperatures. A maximum loss coefficient of .04 was observed for a bending specimen of mean thickness 0.09 inches, with...

Descriptors: \*Ceramic coatings; \*Protective treatments; Damping; Thermal properties; Vibration; Rheology; Modulus of elasticity; Resonant frequency; Stresses; Thermal analysis; Numerical analysis

49/3,K/9 (Item 6 from file: 6)

DIALOG(R) File 6:NTIS

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0284563 NTIS Accession Number: AD-869 025/XAB

Measurement of Damping Coefficients and Dynamic Modulus of Fiber Composites

(Technical note)

Mazza, L. T.; Paxson, E. B.; Rodgers, R. L.

Army Aviation Materiel Labs., Fort Eustis, Va.

Corp. Source Codes: 036425

Report No.: USAAVLABS-TN-2

Feb 70 28p

Journal Announcement: GRAI7119

Distribution Limitation now Removed.

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NTIS Prices: PC A03/MF A01

Measurement of Damping Coefficients and Dynamic Modulus of Fiber Composites

The development of new materials, such as fiber-reinforced plastics (FRP), with attendant claims of high damping as compared to metals, has led to an increased interest in the damping coefficients and dynamic modulus of these materials. No theoretical methods are available to describe the mechanism of damping in FRP. The experimental techniques developed to measure the material damping of FRP were exponential decay of a vibrating beam (free-free mode) and forced vibration...

Descriptors: \*Reinforced plastics; \*Composite materials; Damping; Cantilever beams; Modulus of elasticity; Fibers; Vibration; Boron alloys; Glass textiles; Shear stresses; Aluminum alloys

49/3,K/10 (Item 1 from file: 8)

DIALOG(R) File 8: Ei Compendex(R)

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07641497 E.I. No: EIP97033561163

Title: Analysis of reinforced plastic pipes subjected to dynamic loads Author: Bratt, J.F.

Corporate Source: Norwegian Univ of Science and Technology, Trondheim, Norway

Conference Title: Proceedings of the 1996 3rd Joint Conference on Engineering Systems Design and Analysis, ESDA. Part 9 (of 9)

Conference Location: Montpellier, Fr Conference Date: 19960701-19960704 E.I. Conference No.: 46123

Source: American Society of Mechanical Engineers, Petroleum Division (Publication) PD v 81 n 9 1996. ASME, New York, NY, USA. p 187-191 Publication Year: 1996

CODEN: ASMPEX Language: English

...Abstract: system needs careful analysis. Responses to dynamic loads depend upon material properties among which the modulus of elasticity and structural damping coefficient are important. The former increases by 25% when the pipe is heated 70 degrees C thus substantially altering the system eigenvalues. Reinforced plastic material, on the other hand, exhibits relatively high damping coefficient which may diminish the dynamic stress level, left bracket 1 right bracket. Dynamic deflections are

Identifiers: Structural damping coefficient; Dynamic stresses

49/3,K/11 (Item 2 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)
(c) 2007 Elsevier Eng. Info. Inc. All rts. reserv.

05866251 E.I. Monthly No: EI9003025274

Title: Rapidly solidified aluminum alloys for high temperature/ high stiffness applications.

Author: Gilman, Paul S.; Das, Santosh K.

Corporate Source: Allied-Signal Inc, Morristown, NJ, USA Source: Metal Powder Report v 44 n 9 Sep 1989 p 616-620

Publication Year: 1989

CODEN: MPWRAQ ISSN: 0026-0657

Language: English

Title: Rapidly solidified aluminum alloys for high temperature/ high stiffness applications.

Identifiers: RAPID SOLIDIFICATION; COEFFICIENT OF THERMAL EXPANSION; MECHANICAL PROPERTIES; YOUNG 'S MODULUS OF ELASTICITY; SPECIFIC STIFFNESS; FATIGUE CRACK GROWTH

49/3,K/12 (Item 3 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)
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05134166 E.I. Monthly No: EIM8611-081353

Title: DEVELOPMENT OF SPACE STATION STRUT DESIGN.

Author: Johnson, R. R.; Bluck, R. M.; Holmes, A. M. C.; Kural, M. H. Corporate Source: Lockheed Missiles & Space Co, Sunnyvale, CA, USA

Conference Title: 31st International SAMPE Symposium and Exhibition 1986: Materials Sciences for the Future.

Conference Location: Los Angeles, CA, USA Conference Date: 19860407 E.I. Conference No.: 08126

Source: National SAMPE Symposium and Exhibition (Proceedings) 31st. Publ by SAMPE, Azusa, CA, USA p 90-102

Publication Year: 1986

CODEN: NSSED2 ISSN: 0147-9598 ISBN: 0-938994-30-1

Language: English

Abstract: Candidate Space Station struts exhibiting high stiffness (38-40 msi modulus of elasticity) were manufactured and experimentally evaluated. One and two inch diameter aluminum-clad evaluation specimens were...

...elements having 80 percent high-modulus graphite epoxy and 20 percent

aluminum. Performed tests included modulus of elasticity, thermal cycling, and coefficient of thermal expansion. The paper describes the design approach, including an analytical assessment of strut...

49/3,K/13 (Item 4 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)
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05029148 E.I. Monthly No: EI8610102807 E.I. Yearly No: EI86112294 Title: DEVELOPMENT OF SPACE STATION STRUT DESIGN.

Author: Johnson, R. R.; Bluck, R. M.; Holmes, A. M. C.; Kural, M. H. Corporate Source: Lockheed Missiles & Space Co Inc, Synnyvale, CA, USA

Source: SAMPE Quarterly v 17 n 4 Jul 1986 p 1-9

Publication Year: 1986

CODEN: SAMQA2 ISSN: 0036-0821

Language: ENGLISH

Abstract: Candidate Space Station struts exhibiting high stiffness (38-40 msi modulus of elasticity) were manufactured and evaluated. One and two inch diameter aluminum-clad specimens were manufactured using...

...performed on elements having 80 percent high-modulus graphite-epoxy and 20 percent aluminum included modulus of elasticity, thermal cycling, and coefficient of thermal expansion. The paper describes the design approach, including an analytical assessment of thermal...

Identifiers: GRAPHITE EPOXY COMPOSITES; SPACE STATION STRUTS; 7075-T6 ALUMINUM ALLOY; MODULUS OF ELASTICITY; COEFFICIENT OF THERMAL EXPANSION

49/3,K/14 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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03632958 Genuine Article#: PT552 No. References: 9

Title: PHYSICAL AND MECHANICAL-PROPERTIES AND THE STRUCTURE OF AS-QUENCHED TI-NI-AL ALLOYS

Author(s): MATLAKHOVA LA; FEDOTOV SG; PEKHTEREVA NN

Journal: RUSSIAN METALLURGY, 1994, N3, P91-95

ISSN: 0036-0295

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Abstract: The dependence of the modulus of normal elasticity E, shear modulus G, and logarithmic damping coefficient Q on the concentration and structure of as-quenched alloys of the system Ti - Ni

...concentration is given in weight %). The alloys with the martensite alpha' (alpha'')-phase structure display high damping properties. The beta-phase considerably deteriorates these properties. Addition of Alup to 3% expands...

49/3,K/15 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online
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02046609 ORDER NO: AADAA-I3150808
Development and characterization of acoustically efficient cementitious

#### materials

Author: Neithalath, Narayanan

Degree: Ph.D. Year: 2004

Corporate Source/Institution: Purdue University (0183)

Source: VOLUME 65/10-B OF DISSERTATION ABSTRACTS INTERNATIONAL.

PAGE 5287. 245 PAGES

ISBN: 0-496-11129-9

...model, a pore connectivity factor has been developed, that correlates well with the acoustic absorption **coefficient**. A falling head permeameter has been designed to ascertain the water permeability of EPC mixtures...

...morphologically altered cellulose fibers considered. The physical and mechanical properties (porosity, flexural and compressive strengths, modulus of elasticity), acoustic absorption, and the energy dissipating capacity (specific damping capacity) are evaluated. Composite mixing relations have been used to model the loss modulus and loss...

49/3,K/16 (Item 1 from file: 56)

DIALOG(R) File 56: Computer and Information Systems Abstracts (c) 2007 CSA. All rts. reserv.

Analysis of reinforced plastic pipes subjected to dynamic loads

Bratt, J F

Norwegian Univ of Science and Technology, Trondheim, Norway

PAGES: 187-191

PUBLICATION DATE: 1996

PUBLISHER: ASME, NEW YORK, NY, (USA)

#### CONFERENCE:

The 1996 3rd Joint Conference on Engineering Systems Design and Analysis, ESDA. Part 9 (of 9), Montpellier, Fr, 01-04 July 1996

DOCUMENT TYPE: Conference Paper

RECORD TYPE: Abstract LANGUAGE: English

FILE SEGMENT: Computer & Information Systems Abstracts

#### ABSTRACT:

... system needs careful analysis. Responses to dynamic loads depend upon material properties among which the modulus of elasticity and structural damping coefficient are important. The former increases by 25% when the pipe is heated 70 degrees C thus substantially altering the system eigenvalues. Reinforced plastic material, on the other hand, exhibits relatively high damping coefficient which may diminish the dynamic stress level, [1]. Dynamic deflections are large in GRP piping...

IDENTIFIERS: Structural damping coefficient; Dynamic stresses

49/3,K/17 (Item 1 from file: 57)

DIALOG(R)File 57:Electronics & Communications Abstracts (c) 2007 CSA. All rts. reserv.

0000531540 IP ACCESSION NO: 200609-22-078209 Evaluation of alternative materials for system-on-package (SOP) substrates

Shinotani, K-I; Raj, P M; Seo, M; Bansal, S; Sakurai, H; Bhattacharya, S K; Tummala, R

IEEE Transactions on Components and Packaging Technologies, v 27, n 4, p 694-701, Dec. 2004
PUBLICATION DATE: 2004

PUBLISHER: Institute of Electrical and Electronics Engineers, Inc., 445 Hoes Ln, Piscataway, NJ, 08854-1331 COUNTRY OF PUBLICATION: USA PUBLISHER URL: http://ieee.org

PUBLISHER EMAIL: inspec@ieee.org

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract LANGUAGE: English ISSN: 1521-3331

FILE SEGMENT: Electronics & Communications Abstracts

ABSTRACT:

... the Packaging Research Center, Georgia Institute of Technology. The effect of board properties such as **coefficient** of thermal expansion (CTE) and high elastic modulus upon the increase in flip chip reliability...

...ceramics with lower CTE (AlN, 4 ppm/ deg C) were selected as inorganic boards with  ${\bf high}$   ${\bf stiffness}$ . The thermomechanical reliability of the electrical interconnections was evaluated with flip-chips assembled on five

...underfill, it is necessary to have high elastic modulus along with Si-matched CTE. Ultra- high stiffness is an important requirement for developing new board materials that can realize SOP concept.

DESCRIPTORS: Dielectrics; Warpage; Stresses; Aluminum nitride; Carbon fiber reinforced plastics; Packaging; Chips; Thermal cycling; Modulus of elasticity; Stiffness; Polymer matrix composites; Silicon carbide; Silicon; Elastic modulus; Materials selection; Failure mechanisms; Test vehicles...

49/3,K/18 (Item 1 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management
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#### 01191889 W98040039419

Viscoelastic tensile and shear properties of the 62 wt-% Sn-36 wt-% Pb-2 wt-% Ag solder alloy

(Viskoelastische Zug- und Schereigenschaften einer 62gew%Sn-36gew%Pb-2gew%Ag Lotlegierung)
Veidt, M
Univ. of Queensland, Brisbane, AUS
Journal of Materials Science, v33, n6, pp1607-1610, 1998
Document type: journal article Language: English
Record type: Abstract
ISSN: 0022-2461

#### ABSTRACT:

...100 deg C are presented. The dynamic tensile and shear moduli and the viscous damping coefficients were measured using a phase-sensitive resonance technique. The results show that the temperature dependence...

...can be used to define a lower bound of the temperature dependence of the viscous damping coefficients of the material. For a temperature rise from 20 deg C to 65 deg C the dynamic Young's and shear moduli decrease by approximately 6 % and the damping coefficient increases by approximately 80 %

...DESCRIPTORS: ATTENUATION; SOLDERING ALLOYS; TIN ALLOYS; TENSION TEST; EUTECTIC ALLOYS; COULOM MODULUS; ELASTIC MODULUS; OSCILLATION; DYNAMIC MODULUS OF ELASTICITY; TEMPERATURE DEPENDENCE; DYNAMIC TESTING

49/3,K/19 (Item 2 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management
(c) 2007 FIZ TECHNIK. All rts. reserv.

#### 01107678 M97030450579

Analysis of reinforced plastic pipes subjected to dynamic loads (Analyse von verstaerkten Kunststoffrohren unter dynamischen Belastungen) Bratt, JF

Norwegian Univ. of Sci. and Technol., Trondheim, N ESDA 1996, Engineering Systems Design and Analysis Conf., 3rd Biennial Joint Conf., Vol. 9, Montpellier, F, Jul 1-4, 19961996 Document type: Conference paper Language: English

Record type: Abstract ISBN: 0-7918-1504-8

#### ABSTRACT:

...system needs careful analysis. Responses to dynamic loads depend upon material properties among which the modulus of elasticity and structural damping coefficient are important. The former increases by 25% when the pipe is heated 70 degrees C thus substantially altering the system eigenvalues. Reinforced plastic material, on the other hand, exhibits relatively high damping coefficient which may diminish the dynamic stress level. Dynamic deflections are large in GRP piping thus...

49/3,K/20 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal
(c) 2007 INIST/CNRS. All rts. reserv.

14000177 PASCAL No.: 99-0185154

Fatigue damage accumulation in 3-dimensional SiC/SiC composites KOSTOPOULOS V; PAPPAS Y Z; MARKOPOULOS Y P

Applied Mechanics Laboratory, University of Patras, Patras University Campus, 265 00 Patras, Greece

Journal: Journal of the European Ceramic Society, 1999, 19 (2) 207-215 Language: English

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- ... fatigue loading on the material integrity was evaluated by measuring the degradation of the dynamic modulus of elasticity and the increase of the material damping. Conclusions, concerning design aspects using these materials, as well as fatigue life prediction were provided...
- ...English Descriptors: Ceramic fiber-SEC; Mechanical properties; Mechanical degradation; Fatigue; Dynamic load; Acoustic emission; Elastic

modulus; Damping coefficient ; Internal friction; Interface properties; Experimental study

...French Descriptors: SUB; Fibre ceramique-SEC; Propriete mecanique; Degradation mecanique; Fatigue; Charge dynamique; Emission acoustique; Module elasticite; Coefficient amortissement; Frottement interne; Propriete interface; Etude experimentale; Composite SiC SiC

49/3,K/21 (Item 2 from file: 144) DIALOG(R)File 144:Pascal (c) 2007 INIST/CNRS. All rts. reserv.

13607853 PASCAL No.: 98-0312875

Frequency dependences of complex moduli and complex Poisson's ratio of real solid materials

PRITZ T

Acoustics Laboratory, Szikkti Labs, Becsi ut 122-124, 1034 Budapest,

Journal: Journal of sound and vibration, 1998, 214 (1) 83-104 Language: English

Copyright (c) 1998 INIST-CNRS. All rights reserved.

The concept of a complex modulus of elasticity is a powerful and widely used tool for characterizing the linear dynamic elastic and damping properties of solid materials in the frequency domain. It is shown in this paper that typical characters of frequency...

French Descriptors: Vibration mecanique; Amortissement vibration; Module deformation; Nombre complexe; Reponse frequence; Fluage; Relaxation contrainte; Coefficient Poisson; Modelisation; Causalite; Etude experimentale; Caoutchouc; 4630M

49/3,K/22 (Item 3 from file: 144) DIALOG(R)File 144:Pascal (c) 2007 INIST/CNRS. All rts. reserv.

11641490 PASCAL No.: 94-0493608

Calculation of transient state response of machine members made of composite materials and of sandwich panels

KUCHARSKI T

Tech. univ. Gdansk, dep. mechanical eng., 80-952 Gdansk, Poland Journal: Computers & structures, 1994, 51 (5) 495-501 Language: English

... The dynamic analysis is more complicated when the variation with respect to frequency of the modulus of elasticity and of damping coefficient is taken into account. In this case the direct integration method cannot be used to...

English Descriptors: Mechanical vibrations; Transients; Composite materials; Sandwich structures; Damping; Vibration control; Passive system; Numerical solution; Structural analysis

49/3,K/23 (Item 1 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics
(c) 2007 RAPRA Technology Ltd. All rts. reserv.

00499692

TITLE: ADVANCED MATERIALS TO THE FORE

AUTHOR(S): Liu S K

CORPORATE SOURCE: Southwest Jiaotung, University SOURCE: MRS Bulletin; 18, No.11, Nov.1993, p.93-6

ISSN: 0883-7694

JOURNAL ANNOUNCEMENT: 199402 RAPRA UPDATE: 199402

DOCUMENT TYPE: Journal Article

LANGUAGE: English SUBFILE: (R) RAPRA

...ABSTRACT: a variety of advanced materials and metal alloys as to their performance in terms of modulus of elasticity and damping capacity, and other mechanical properties such as tensile strength, hardness and density.

DESCRIPTORS: ALLOY; APPLICATION; COMPANY; COMPOSITE; COST; DAMPING \*\*COEFFICIENT; DATA; DEFORMATION; DENSITY; EPOXIDE RESIN; EPOXY RESIN; FIBRE B; FIBRE-REINFORCED PLASTIC; FRP; GOLF CLUB...

49/3,K/24 (Item 2 from file: 323)
DIALOG(R)File 323:RAPRA Rubber & Plastics
(c) 2007 RAPRA Technology Ltd. All rts. reserv.

00320372

TITLE: DEVELOPMENT OF SPACE STATION STRUT DESIGN
AUTHOR(S): Johnson R R; Bluck R M; Holmes A M C; Kural M H
CORPORATE SOURCE: LOCKHEED MISSILES & SPACE CO.INC.
SOURCE: SAMPE Quarterly; 17, No.4, July 1986, p.1-9
ISSN: 0036-0821

CODEN: SAMQA2 JOURNAL ANNOUNCEMENT: 198701 RAPRA UPDATE: 198625

DOCUMENT TYPE: Journal Article

LANGUAGE: English

ABSTRACT: Candidate Space Station struts exhibiting high stiffness (38-40 msi modulus of elasticity) were manufactured and experimentally evaluated. One and two inch diameter aluminium-clad evaluation specimens were...

- ...using a dry fibre resin injection process. Preliminary tests of elastic modulus, thermal cycling and coefficient of thermal expansion were performed on strut elements having 80% high-modulus graphite/epoxy resin...
- ...DESCRIPTORS: PLASTIC; REINFORCED PLASTIC; RESIN INJECTION; SPACE APPLICATION; STIFFNESS; FLEXURAL PROPERTIES; TECHNICAL; THERMAL CYCLING; THERMAL EXPANSION COEFFICIENT; THERMAL PROPERTIES; THERMOSET; CARBON FIBER-REINFORCED PLASTIC; GRAPHITE FIBER-REINFORCED PLASTIC

49/3,K/25 (Item 1 from file: 335)
DIALOG(R)File 335:Ceramic Abstracts/World Ceramics Abstracts
(c) 2007 CSA. All rts. reserv.

0000399404 IP ACCESSION NO: 85-18559 Evaluation of alternative materials for system-on-package (SOP) substrates

Shinotani, K-I; Raj, P M; Seo, M; Bansal, S; Sakurai, H; Bhattacharya, S K; Tummala, R

IEEE Transactions on Components and Packaging Technologies, v 27, n 4, p 694-701, Dec. 2004
PUBLICATION DATE: 2004

PUBLISHER: Institute of Electrical and Electronics Engineers, Inc., 445

Hoes Ln, Piscataway, NJ, 08854-1331

COUNTRY OF PUBLICATION: USA PUBLISHER URL: http://ieee.org PUBLISHER EMAIL: inspec@ieee.org

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract LANGUAGE: English ISSN: 1521-3331

FILE SEGMENT: Ceramics Abstracts/World Ceramic Abstracts

ABSTRACT:

... the Packaging Research Center, Georgia Institute of Technology. The effect of board properties such as coefficient of thermal expansion (CTE) and high elastic modulus upon the increase in flip chip reliability...

...ceramics with lower CTE (AlN, 4 ppm/ deg C) were selected as inorganic boards with  ${\bf high}$   ${\bf stiffness}$ . The thermomechanical reliability of the electrical interconnections was evaluated with flip-chips assembled on five

...underfill, it is necessary to have high elastic modulus along with Si-matched CTE. Ultra- high stiffness is an important requirement for developing new board materials that can realize SOP concept.

DESCRIPTORS: Dielectrics; Warpage; Stresses; Aluminum nitride; Carbon fiber reinforced plastics; Packaging; Chips; Thermal cycling; Modulus of elasticity; Stiffness; Polymer matrix composites; Silicon carbide; Silicon; Elastic modulus; Materials selection; Failure mechanisms; Test vehicles...

49/3,K/26 (Item 2 from file: 335)
DIALOG(R)File 335:Ceramic Abstracts/World Ceramics Abstracts
(c) 2007 CSA. All rts. reserv.

0000304049 IP ACCESSION NO: 78-06924A FATIGUE DAMAGE ACCUMULATION IN 3-DIMENSIONAL SIC/SIC COMPOSITES

Kostopoulos, V; Pappas, Y Z; Markopoulos, Y P Patras, University

Journal of the European Ceramics Society, v 19, n 2, p 207-215, 1999 PUBLICATION DATE: 1999

PUBLISHER: Elsevier Science Ltd., Oxford Fulfillment Centre, P.O. Box 800, Kidlington, Oxford, OX5 1DX COUNTRY OF PUBLICATION: UK

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract LANGUAGE: English

ISSN: 0955-2219; 0955-2219

FILE SEGMENT: Ceramics Abstracts/World Ceramic Abstracts

#### ABSTRACT:

... fatique loading on the material integrity were evaluated by measuring

the degradation of the dynamic modulus of elasticity and the increase of the material damping. The sensitivity of the proposed methodology is discussed. 14 refs.

...DESCRIPTORS: sic fibre-reinforced sic composite; Non-destructive testing; Dynamic evaluation of fatigue; Mathematical analysis; Dynamic modulus of elasticity and damping coefficient; Acoustic emission; Ceramic matrix composite; Cmc; Composite; Damage mechanics

51/3,K/1 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online
(c) 2007 ProQuest Info&Learning. All rts. reserv.

02174021 ORDER NO: AADAA-I3228367

Flying height control sliders with piezoelectric and thermal nanoactuators for ultrahigh density magnetic recording

Author: Juang, Jia-Yang

Degree: Ph.D. Year: 2006

Corporate Source/Institution: University of California, Berkeley (0028)

Source: VOLUME 67/08-B OF DISSERTATION ABSTRACTS INTERNATIONAL.

PAGE 4664. 217 PAGES

ISBN:

978-0-542-82518-7

...1 Tbit/in<super> 2</super>, which is the goal on the next generation of hard disk drives .

It is found that the intermolecular and electrostatic forces at the head-disk interface that...

...in flying performance, such as track-seeking and dynamic load/unload, due to its remarkably high stiffness and damping. We also propose an inexpensive and low-temperature process for integrating the piezoelectric material in...

...we conducted experimental analysis to investigate the flying and actuation performances of the fabricated head- gimbal -assemblies. The FH was successfully reduced from about 10 nm to contact, and a track...

...the mechanical challenges inherent in ultrahigh density magnetic recording required for the next generation of hard disk drives as well as some solutions to address these challenges.

```
File 348: EUROPEAN PATENTS 1978-2007/ 200749
         (c) 2007 European Patent Office
File 349:PCT FULLTEXT 1979-2007/UB=20071122UT=20071115
         (c) 2007 WIPO/Thomson
Set
        Items
                Description
                GIGAPASCAL??
S1
          343
                S1(3N)(10 OR TEN)
S2
           22
                DAMP? (3N) (CAPACIT? OR CAPABILIT?)
S3
          544
S4
          495
                GREATER (1W) 0 () 02
         3768
                HIGH()STIFFNESS
S5
S6
         2950
               HIGH (3N) DAMP???
                (MODULUS OR MODULI OR YOUNG) (3N) ELASTICITY
S7
        11923
S8
       206854
                COEFFICIENT? OR RESTITUTION
                (DISC OR DISK OR HARD) (3N) DRIVE?? OR HDD
        77310
S9
                (HEAD OR SLIDER OR TRANSDUCER OR PICKUP) (3N) SUSPENSION
         1529
S10
         3263
                GIMBAL
S11
S12
         3506
                DAMPING (3N) MATERIAL??
                POLYIMIDE? OR POLYAMIDE? OR POLYURETHANE?
S13
       210131
                EPOXY()RESIN OR POLYETHER()URETHANE? OR POLYETHERURETHANE -
S14
       267210
             OR RUBBER OR SILICONE() RUBBER OR POLYVINYLCHLORIDE? OR POLYVI-
             NYL()CHLORIDE? OR POLYBUTADIENE?
       233622
                PI OR PVC OR PU
S15
                STAINLESS () STEEL
S16
       139606
S17
       267894
                ALUMINUM
S18
            1
                ZETA()0()02
                QUIET()STEEL OR STAR()SILENT()STEEL
S19
            1
                AU=(SASSINE, J? OR BHATTACHARYA, S? OR HUTCHINSON, A? OR L-
S20
          142
             IMMER, J? OR SASSINE J? OR BHATTACHARYA S? OR HUTCHINSON A? OR
              LIMMER J?)
          585
                LOAD() BEAM
S21
                S18 OR S19
S22
            2
                IDPAT (sorted in duplicate/non-duplicate order)
S23
            2
                IDPAT (primary/non-duplicate records only)
S24
            2
S25
            0
                S2(S)S4
            0
                S2(S)S5
S26
            0
                S2(S)(S9 OR S10 OR S11)
S27
                (S3 OR S6 OR S12)(S)(S9 OR S10 OR S11)
S28
          107
S29
           15
                S28(S)(S13 OR S14 OR S15)
S30
            0
                S29(S)S5
            6
                S29 AND IC=G11B?
S31
                S31 NOT S24
S32
            6
            0
                S28(S)S1
S33
            2
                S1(S)(S3 OR S6 OR S12)
S34
            2
                S34 NOT (S24 OR S32)
S35
            0
                S20 AND S1
S36
            0
                S20 AND S4
S37
            0
                (S1 OR S2)(S)S4
S38
            0
                S2(S)S5
S39
            0
                S2(S)(S9 OR S10 OR S11)
S40
            1
                S2 AND IC=G11B?
S41
                S41 NOT (S34 OR S24 OR S32)
S42
            1
S43
           20
                S1(S)(S16 OR S17)
            0
                S43(S)S21
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S43(S)(S3 OR S6 OR S12)

S44

S45

1

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24/3,K/1
            (Item 1 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT
(c) 2007 WIPO/Thomson. All rts. reserv.
            **Image available**
01502107
METHOD AND APPARATUS FOR CORRELATING LEVELS OF BIOMARKER PRODUCTS WITH
   DISEASE
PROCEDE ET APPAREIL PERMETTANT DE METTRE DES NIVEAUX DE PRODUITS DE
    BIOMARQUEURS EN CORRELATION AVEC UNE MALADIE
Patent Applicant/Assignee:
  GENENEWS INC, Unit 15-800 Petrolia Road, Toronto, Ontario, M3J 3K4, CA,
    CA (Residence), CA (Nationality), (For all designated states except:
Patent Applicant/Inventor:
  LIEW Choong-chin, 81 Millersgrove Drive, Toronto, Ontario, M2R 3S1, CA,
    CA (Residence), CA (Nationality),
  HAN Mark, 5-3 Four Winds Dr., North York, Ontario, M3J 1K7, CA, CA
    (Residence), CN (Nationality),
  YAGER Thomas, 1268 Cermel Drive, Mississauga, Ontario, I5H 3V4, CA, CA
    (Residence), US (Nationality),
  CHAO Samuel, 114 Glen Shield Avenue, Concord, Ontario, L4K 1T6, CA, CA
    (Residence), CA (Nationality),
  ZHENG Run, 20 Observatory Lane Unit 135, Richmond Hill, Ontario, L4C 0M7,
    CA, CA (Residence), CA (Nationality),
  ZHANG Hongwei, 3 Atwood Place, Toronto, Ontario, M9V 1L1, CA, CA
    (Residence), CA (Nationality),
Legal Representative:
  FRASER Janis K (agent), FISH & RICHARDSON P.C., P.O. Box 1022,
   Minneapolis, MN 55440-1022, US
Patent and Priority Information (Country, Number, Date):
                        WO 200748074 Al 20070426 (WO 0748074)
  Patent:
                        WO 2006US41600 20061023 (PCT/WO US2006041600)
  Application:
  Priority Application: US 2005729055 20051021; US 2006758418 20060112
Designated States:
(All protection types applied unless otherwise stated - for applications
2004+)
  AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
 DZ EC EE EG ES FI GB GD GE GH GM GT HN HR HU ID IL IN IS JP KE KG KM KN
  KP KR KZ LA LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MY MZ NA NG NI
  NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SK SL SM SV SY TJ TM TN TR TT
  TZ UA UG US UZ VC VN ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU LV MC NL
 PL PT RO SE SI SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 214522
```

24/3,K/2 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00513522

RAIL TRANSIT SYSTEM

SYSTEME DE TRANSPORT FERROVIAIRE
Patent Applicant/Assignee:
 OWEN William E,
Inventor(s):

OWEN William E,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 9944874 A1 19990910

Application:

WO 99US4484 19990302 (PCT/WO US9904484)

Priority Application: US 9876593 19980303; US 99260144 19990301

Designated States:

(Protection type is "patent" unless otherwise stated - for applications

prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML

MR NE SN TD TG
Publication Language: English

Fulltext Word Count: 16049

Fulltext Availability: Detailed Description

English Abstract

...beam and propelling the body along the beam. Improvements to the transit system include a **quiet** steel rail with vibration isolation for the beam, a vehicle braking system using a fixed plate...

Detailed Description

... a, I b, and I c are a side, top and end view of a quiet steel rail with vibration isolation according to an aspect of the present invention; Figs. 2a and...of operating that system, or other rail-based transit systems, will now be described.

1. Quiet Steel Rail With Vibration Isolation In Fig. I a-c a steel wheel (IO), used as...

?

```
(Item 1 from file: 348)
32/3, K/1
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2007 European Patent Office. All rts. reserv.
01423625
Hard disk drive mounting bracket for noise and vibration control
                             Festplatteneinheit
Haltevorrichtung
                    fur
                                                    zur
                                                           Gerausch-
   Vibrationsregelung
Support de montage d'unite a disque dur pour controler le bruit et les
    vibrations
PATENT ASSIGNEE:
  Material Sciences Corporation, (575711), 2300 East Pratt Boulevard, Elk
    Grove Village, Illinois 60007-5995, (US), (Applicant designated States:
    all)
INVENTOR:
  Boss, Daniel E., 493 Yorkshire Court, Grayslake, IL 60030, (US)
  Williams, Richard K., 1424 West Webster Street, Apt 2, Chicago, IL 60614,
  Nashif, Ahid, 9698 Ash Court, Cincinnati, OH 45242, (US)
  Pardus, Gregory, 6815 Alabama, Darien, IL 60561, (US)
  Uslander, Ira J., 1920 Chestnut Avenue, Glenview, IL 60025, (US)
LEGAL REPRESENTATIVE:
  Wehnert, Werner, Dipl.-Ing. et al (12791), Patentanwalte Hauck, Graalfs,
    Wenert, Doring, Siemons, Schildberg Mozartstrasse 23, 80336 Munchen,
PATENT (CC, No, Kind, Date): EP 1202280 A2 020502 (Basic)
                              EP 1202280 A3 030122
                              EP 2001125576 011025;
APPLICATION (CC, No, Date):
PRIORITY (CC, No, Date): US 243457 P 001025; US 280095 P 010330
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS (V7): G11B-033/08
ABSTRACT WORD COUNT: 167
NOTE:
  Figure number on first page: 2
LANGUAGE (Publication, Procedural, Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language
                           Update
                                     Word Count
      CLAIMS A (English)
                           200218
                                       768
                                      2170
      SPEC A
                (English)
                           200218
Total word count - document A
                                      2938
Total word count - document B
                                         n
Total word count - documents A + B
                                      2938
```

INTERNATIONAL PATENT CLASS (V7): G11B-033/08

...SPECIFICATION the viscoelastic core 33 typically being substantially thinner.

Referring to FIG. 2, in use, the hard disk drive 10 is disposed beneath the main panel 21 of the bracket 20 and is supported...

- ...mounting screws 35 extending through the apertures 26, the bracket 20 being isolated from the hard disk drive 10 by the use of isolating grommets 36, respectively disposed on the inner and outer...
- ...and receiving the screws 35 therethrough. The grommets 36 may be constructed of a soft rubber material, preferably having a high damping characteristic. The bracket 20 is mounted in place in the

associated set top box or... ...pair of longitudinally spaced-apart, circular holes 47. Referring to FIG. 6, in use, the hard disk drive 10 is disposed beneath the main panel 41 of the bracket 40 and is supported... ...47 and receiving the fasteners therethrough. The grommets 48 may be constructed of a soft rubber material, preferably having a high damping characteristic. It is a significant aspect that the hard disk drive 10 is mounted in... 32/3, K/2(Item 2 from file: 348) DIALOG(R) File 348: EUROPEAN PATENTS (c) 2007 European Patent Office. All rts. reserv. 00947516 Disc drive Plattenantrieb Entrainement de disque PATENT ASSIGNEE: KABUSHIKI KAISHA TOSHIBA, (213130), 72, Horikawa-cho, Saiwai-ku, Kawasaki-shi, Kanaqawa-ken 210, (JP), (applicant designated states: AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE) Aoyama, Noboru, c/o Toshiba Kabushiki Kaisha, Intell. Prop. Div., 1-1 Shibaura 1-chome Minato-ku Tokyo 105, (JP) Matsuda, Hitoshi, c/o Toshiba Kabushiki Kaisha, Intell. Prop. Div., 1-1 Shibaura 1-chome Minato-ku Tokyo 105, (JP) LEGAL REPRESENTATIVE: Kramer, Reinhold, Dipl.-Ing. (7031), Blumbach, Kramer & Partner Patentanwalte Radeckestrasse 43, 81245 Munchen, (DE) PATENT (CC, No, Kind, Date): EP 860832 A2 980826 (Basic) EP 860832 A3 990127 EP 97122409 971218; APPLICATION (CC, No, Date): PRIORITY (CC, No, Date): JP 9735122 970219 DESIGNATED STATES: DE; FR; GB; NL INTERNATIONAL PATENT CLASS (V7): G11B-033/08; G11B-017/028; G11B-017/04 ; ABSTRACT WORD COUNT: 177 LANGUAGE (Publication, Procedural, Application): English; English; FULLTEXT AVAILABILITY: Word Count Available Text Language Update CLAIMS A (English) 9835 440 (English) 9835 2449 SPEC A Total word count - document A 2889 Total word count - document B Total word count - documents A + B INTERNATIONAL PATENT CLASS (V7): G11B-033/08 ... ... G11B-017/028 ... ... G11B-017/04

...SPECIFICATION vibration-damping construction capable of absorbing vibrations which have occurred inside the disc drive.

Silicon rubber, natural rubber, butyl rubber, and the like are hitherto used as the material of the vibration-damping member

(damper) constituting the vibration-damping construction of the **disc drive**. The vibration-damping member composed of such a material is required to have a sufficiently...

...thus having a low degree of vibration-absorbing efficiency.

Consequently, it is difficult for the **disc drive** to have a favorable vibration-damping performance.

It is accordingly an object of the present...

32/3,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2007 European Patent Office. All rts. reserv.

#### 00928971

Damping material and head suspension with use thereof Dampfungsmaterial und Kopfaufhangung mit Verwendung davon Materiau amortisseur et suspension de tete l'utilisant PATENT ASSIGNEE:

NITTO DENKO CORPORATION, (301873), 1-2, Shimohozumi 1-chome Ibaraki-shi, Osaka, (JP), (applicant designated states: DE;GB)
INVENTOR:

Nakamura, Masao, c/o Nitto Denko Corp., 1-2, Shimohozumi 1-chome, Ibaraki-shi, Osaka, (JP)

Iida, Hiroyuki, c/o Nitto Denko Corp., 1-2, Shimohozumi 1-chome,
 Ibaraki-shi, Osaka, (JP)

Tatsumi, Motoshige, c/o Nitto Denko Corp., 1-2, Shimohozumi 1-chome, Ibaraki-shi, Osaka, (JP)

Toyota, Hidetsugu, c/o Nitto Denko Corp., 1-2, Shimohozumi 1-chome, Ibaraki-shi, Osaka, (JP)

LEGAL REPRESENTATIVE:

Grunecker, Kinkeldey, Stockmair & Schwanhausser Anwaltssozietat (100721) , Maximilianstrasse 58, 80538 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 847043 A1 980610 (Basic)

APPLICATION (CC, No, Date): EP 97121150 971202;

PRIORITY (CC, No, Date): JP 96322953 961203

DESIGNATED STATES: DE; GB

INTERNATIONAL PATENT CLASS (V7): G11B-005/48

ABSTRACT WORD COUNT: 95

LANGUAGE (Publication, Procedural, Application): English; English; English; FULLTEXT AVAILABILITY:

Available Text Language Update Word Count
CLAIMS A (English) 9824 273
SPEC A (English) 9824 2368
Total word count - document A 2641
Total word count - document B 0
Total word count - documents A + B 2641

INTERNATIONAL PATENT CLASS (V7): G11B-005/48

#### ... SPECIFICATION manner.

(1) Rate of change in spring constant
Using a damping material in which a polyimide (PI) film, a
stainless steel (SUS) foil, an aluminum (AL) foil or a polyethylene
terephthalate (PET...

...the measurement was carried out by arranging a suspension 22, applying a load to a **gimbal** part 21 of a pressure sensor through the output of voltage from a micro voltmeter...

32/3,K/4 (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

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00859590 \*\*Image available\*\*

VIBRATION DAMPING MONOLITHIC POLYMERS

POLYMERES MONOLITHIQUES AMORTISSEURS DE VIBRATIONS

Patent Applicant/Assignee:

GENERAL ELECTRIC COMPANY, 1 River Road, Schenectady, NY 12345, US, US (Residence), US (Nationality)

Inventor(s):

HARIHARAN Ramesh, 82C Yorkshire Drive, Guilderland, NY 12084, US, DAVIS Gary Charles, 5 Felicia Court, Albany, NY 12205, US, SUBRAMANIAN Suresh, 89 Dane Court, Latham, NY 12110, US,

Legal Representative:

SNYDER Bernard (et al) (agent), General Electric Company, 3135 Easton Turnpike W3C, Fairfield, CT 06431, US,

Patent and Priority Information (Country, Number, Date):

Patent:

WO 200193257 Al 20011206 (WO 0193257)

Application: WO 2001US13126 20010424 (PCT/WO US0113126)
Priority Application: US 2000208139 20000531; US 2000705295 20001103
Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

JP

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

Publication Language: English Filing Language: English Fulltext Word Count: 11835

Main International Patent Class (v7): G11B-007/24 Fulltext Availability:
Detailed Description

Detailed Description

... motor vehicle seat assembly.

Layers of elastomeric materials that absorb energy are other types of damping material. Polyethylene, polypropylene, non conjugated dienes, rubber cross linkers and similar materials are used in these vibration systems. Composites of metal and polymer are employed on the outside of many computer hard disk drives to reduce the noise of the drive within the computer. Vibration dampers are also used in printed circuit boards and spindle motors in internal disk drive applications. In particular, vibration damping materials are used to guard the interior of a disk drive from. extemal shock forces.

Materials used for vibration damping should exhibit large viscous losses in...

32/3,K/5 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00815199 \*\*Image available\*\*

DISK STORAGE SYSTEM AND MOUNTING SYSTEM FOR HEAD/DISK ASSEMBLY SYSTEME DE STOCKAGE DE DISQUE ET SYSTEME DE MONTAGE POUR UN ASSEMBLAGE TETE/DISQUE Patent Applicant/Assignee:

INTERNATIONAL BUSINESS MACHINES CORPORATION, New Orchard Road, Armonk, New York, NY 10504, US, US (Residence), US (Nationality)

IBM UNITED KINGDOM LIMITED, P.O. Box 41, North Harbour, Portsmouth, Hampshire PO6 3AU, GB, GB (Residence), GB (Nationality), (Designated only for: MC)

Inventor(s):

SRI-JAYANTHA Sri, 32 Sherwood Avenue, Ossining, NY 10562, US, KHANNA Vijayeshwar Das, 21 Baldwin Hill Road, Millwood, NY 10546, US, MCVICKER Gerard, 101 Brothers Road, Stormville, NY 12582, US, DANG Hien, 5 Fairview Avenue, Nanuet, NY 10054, US, SHARMA Arun, 51 Winding Brook Road, New Rochelle, NY 10804, US, SATOH Kiyoshi, 5-8-1-303, Kugenumakaigan, Fujisawa-shi, Kanagawa 251-0037 . JP.

NAKAMOTO Tatsuo, 4-7-24, Higashi-ohnuma, Sagamihara-shi, Kanagawa, JP, Legal Representative:

MOSS Robert Douglas (agent), IBM United Kingdom Limited, Intellectual Property Law, Hursley Park, Winchester, Hampshire SO21 2JN, GB,

Patent and Priority Information (Country, Number, Date):
Patent: WO 200148758 Al 20010705 (WO 0148758)

Application:

(PCT/WO GB0004750) WO 2000GB4750 20001212

Priority Application: US 99472175 19991227

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English Filing Language: English

Fulltext Word Count: 8822

Main International Patent Class (v7): G11B-033/08

Fulltext Availability: Detailed Description

## Detailed Description

... deficient in that each

solves only a subset of the three vibration challenges of an HDD , and none of them provides a simple, low-cost solution to the seek-induced transient dynamics. Thus, an HDD with a novel mounting frame that is more robust against vibration can yield a competitive...

...servo algorithms, and inertial force generators, undesirable vibration of a mechanical device, such as an HDD, can be controlled. Previously, using shock isolating rubber mounts, storage devices have been protected from linear shock input. However, due to

space requirements, and gradual improvements in shock enhanced storage component design, explicit shock isolation of disk drives has no longer

been pursued by manufacturers. Removal of traditional shock and vibration isolation mounts...

...moved away from shock isolation design. In today's market, it is believed that no disk drive is manufactured with a shock and

vibration isolation system. Previously, use of a shock isolation system protected an

HDD from shock handling, but it actually degraded the linear vibration problem as well as the settle-out problem. Further, traditional isolation systems use damping materials that are not good heat conductors.

DISCLOSURE OF THE INVENTION is Thus, in view of...

32/3,K/6 (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00792572 \*\*Image available\*\*
HARD DISK DRIVE WITH HIGH BANDWITH
DISQUE DUR A LARGEUR DE BANDE ELEVEE

Patent Applicant/Inventor:

HEATH John Stewart, 34 Olivers Battery Road North, Winchester SO22 4JB, GB, GB (Residence), GB (Nationality)

Patent and Priority Information (Country, Number, Date):

Patent:

WO 200126098 A1 20010412 (WO 0126098)

Application:

WO 2000GB3761 20001002 (PCT/WO GB0003761)

Priority Application: US 99412613 19991006; GB 200020677 20000823

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

DE JP US

Publication Language: English Filing Language: English Fulltext Word Count: 7724

Main International Patent Class (v7): G11B-005/48

Fulltext Availability: Detailed Description

# Detailed Description

- ... in FIGURE 5. The adhesive used to bond plate 30 for these tests (partially crosslinked **epoxy resin**) was selected to give the greatest reduction in amplitude over a wide range of temperature...
- ...may be recalled from the background section of this document that state of the art disk drives have soft adhesive used to bond coil 15 to yoke 16 specifically to achieve damping...
- ...state of 10 the art may be understood by considering the strain applied to the damping material during a vibration cycle. The mode of the vibration (which is in the plane of...
- ...of coil 15 and consequent bending of yoke 16. In the state of the art disk drive such deflection induces strain in the adhesive 20 which is much less than the deflection...

?

```
(Item 1 from file: 348)
35/3,K/1
DIALOG(R) File 348: EUROPEAN PATENTS
(c) 2007 European Patent Office. All rts. reserv.
00593534
Method of particulate densification
Verfahren zum Verdichten von kornigen Massen
Methode pour densifier des masses particulaires
PATENT ASSIGNEE:
  BOEING NORTH AMERICAN, INC., (2268342), 2201 Seal Beach Boulevard, Seal
    Beach, California 90740-8250, (US), (Proprietor designated states: all)
INVENTOR:
  Spiegel, Lyle B., 5924 Nora Lynn Drive, Woodland Hills, California 91367,
  McDermott, William Edward, 28034 Lomo Drive, Rancho Palos Verdes,
    California 90214, (US)
LEGAL REPRESENTATIVE:
  Wachtershauser, Gunter, Prof. Dr. (12711), Patentanwalt, Tal 29, 80331
    Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 603491 A1 940629 (Basic)
                              EP 603491 B1 000412
                              EP 93116995 931020;
APPLICATION (CC, No, Date):
PRIORITY (CC, No, Date): US 979024 921120
DESIGNATED STATES: BE; CH; DE; DK; ES; FR; GB; IT; LI; NL; SE
INTERNATIONAL PATENT CLASS (V7): B22F-003/10
ABSTRACT WORD COUNT: 50
NOTE:
  Figure number on first page: 1
LANGUAGE (Publication, Procedural, Application): English; English
FULLTEXT AVAILABILITY:
Available Text Language
                           Update
                                     Word Count
      CLAIMS B (English)
                           200015
                                       176
      CLAIMS B
                 (German)
                           200015
                                       180
                           200015
      CLAIMS B
                                       214
                 (French)
      SPEC B
                                       856
                (English) 200015
Total word count - document A
                                         O
Total word count - document B
                                      1426
Total word count - documents A + B
                                      1426
...SPECIFICATION a laser. The use of a overlay makes it possible to achieve
  pressures in the gigapascal (GPa) range (1 GPa = 145,000 psi) with
  duration times of several nanoseconds. Various overlay...
...backing material 15 may be utilized, which material is a suitable
  acoustic or stress wave damping material .
    The pressure wave acts on the powder to drive the individual particles
  into intimate contact...
              (Item 1 from file: 349)
 35/3, K/2
DIALOG(R) File 349: PCT FULLTEXT
(c) 2007 WIPO/Thomson. All rts. reserv.
```

GENERAL ELECTRIC COMPANY, 1 River Road, Schenectady, NY 12345, US, US

00735431

DATA STORAGE MEDIA

SUPPORT DE STOCKAGE DE DONNEES Patent Applicant/Assignee:

(Residence), US (Nationality)

#### Inventor(s):

DAVIS John Edward, 58 Salvatore Drive, Westfield, MA 01085, US, FURLANO Daniel, 274 Williams Street, Pittsfield, MA 01201, US, LANDA Bernard Paul, F3 Pondview Drive, Pittsfield, MA 01201, US, LIKIBI Parfait Jean Marie, 3322 Westhampton Drive, Newburgh, IN 47630, US

FEIST Thomas Paul, 11 Wintergreen Circle, Clifton Park, NY 12065, US, DAI Kevin Hsingtao, 3 Carlton Oaks, Clifton Park, NY 12065, US, SUBRAMANIAN Suresh, 89 Dane Court, Latham, NY 12110, US, HARIHARAN Ramesh, 82C Yorkshire Drive, Guilderland, NY 12084, US, BUSHKO Wit Cezary, 118 Haswell Road, Watervliet, NY 12189, US, KUBOTERA Kazunao, 31 Sheffield Drive, Delmar, NY 12054, US, GORCZYCA Thomas B, 3059 New Williamsburg Drive, Schenectady, NY 12303, US

WOODS Joseph, Apartment A14C, 2150 Rosa Road, Schenectady, NY 12309, US, Legal Representative:

SNYDER Bernard (agent), General Electric Company, 3135 Easton Turnpike W3C, Fairfield, CT 06431, US,

Patent and Priority Information (Country, Number, Date):

Patent:

Designated States:

WO 200048172 A2 20000817 (WO 0048172)

Application: WO 2000US3644 20000211 (PCT/WO US0003644)

Priority Application: US 99120101 19990212; US 99134585 19990517; US 99137883 19990607; US 99137884 19990607; US 99146248 19990729

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 18524

Fulltext Availability:

Detailed Description

#### Detailed Description

... a very high stiffness (e.g., aluminum with a Young's modulus of about 70 gigapascals (GPa), and ceramic with a Young's modulus of about 200 GPa), a level above that which has been achieved with plastic substrates. It was unexpectedly found that the damping coefficient of a material is important to offset the decreased stiffness of plastic substrates as compared to aluminum. Consequently...

...spring/dashpot assembly between a vibration source and an object to be vibrated. For effective damping, the material should absorb and/or dissipate the energy of vibration transmitted through the material as energy...

?

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(Item 1 from file: 349)
42/3,K/1
DIALOG(R) File 349: PCT FULLTEXT
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            **Image available**
01459309
METHOD AND PROCESS FOR FABRICATING READ SENSORS FOR READ-WRITE HEADS IN
   MASS STORAGE DEVICES
METHODE ET PROCEDE DESTINES A LA FABRICATION DE CAPTEURS DE LECTURE POUR
    TETES DE LECTURE-ECRITURE DE MEMOIRES DE GRANDE CAPACITE
Patent Applicant/Assignee:
  VEECO INSTRUMENTS INC, 100 SUNNYSIDE BOULEVARD, Suite B, Woodbury, NY
    11797, US, US (Residence), US (Nationality), (For all designated states
    except: US)
Patent Applicant/Inventor:
  HEGDE Hariharakeshave S, 262-04, 58th Street, Little Neck, NY 11362, US,
    US (Residence), IN (Nationality),
  MING Mao, 5136 Corona Court, Pleasanton, CA 94588, US, US (Residence), US
    (Nationality),
  DRUZ Boris, 2522 West 1st Street, Brooklyn, NY 11223, US, US (Residence),
    US (Nationality),
  DEVASAHAYAM Adrian J. 14 Retta Lane, Commack, NY 11725, US, US
    (Residence), IN (Nationality),
Legal Representative:
  HUMPHREY Thomas W et al (agent), Wood, Herron & Evans, L.L.P., 2700 Carew
    Tower, Cincinnati, OH 45202, US
Patent and Priority Information (Country, Number, Date):
                        WO 200702011 A1 20070104 (WO 0702011)
  Patent:
                        WO 2006US23870 20060620 (PCT/WO US2006023870)
  Application:
  Priority Application: US 2005166322 20050624
Designated States:
(All protection types applied unless otherwise stated - for applications
2004+)
  AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
  DZ EC EE EG ES FI GB GD GE GH GM HN HR HU ID IL IN IS JP KE KG KM KN KP
  KR KZ LA LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ
 OM PG PH PL PT RO RS RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG
 US UZ VC VN ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU LV MC NL
  PL PT RO SE SI SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 6976
International Patent Class (v8 + Attributes)
IPC + Level Value Position Status Version Action Source Office:
   G11B-0005/39 ...
Fulltext Availability:
  Detailed Description
```

# Detailed Description

... the hardness of the constituent material of polish stop layer 40 is greater than about 10 gigapascals (GPa). Depending upon the specific forming process, the hardness of DLC for use as the...

# Claim

Claims

... wherein the polish stop layer is composed of a material having a hardness greater than 10 gigapascals.

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45/3,K/1
             (Item 1 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT
(c) 2007 WIPO/Thomson. All rts. reserv.
00735431
DATA STORAGE MEDIA
SUPPORT DE STOCKAGE DE DONNEES
Patent Applicant/Assignee:
  GENERAL ELECTRIC COMPANY, 1 River Road, Schenectady, NY 12345, US, US
    (Residence), US (Nationality)
Inventor(s):
 DAVIS John Edward, 58 Salvatore Drive, Westfield, MA 01085, US,
  FURLANO Daniel, 274 Williams Street, Pittsfield, MA 01201, US,
  LANDA Bernard Paul, F3 Pondview Drive, Pittsfield, MA 01201, US,
 LIKIBI Parfait Jean Marie, 3322 Westhampton Drive, Newburgh, IN 47630, US
  FEIST Thomas Paul, 11 Wintergreen Circle, Clifton Park, NY 12065, US,
 DAI Kevin Hsingtao, 3 Carlton Oaks, Clifton Park, NY 12065, US,
  SUBRAMANIAN Suresh, 89 Dane Court, Latham, NY 12110, US,
 HARIHARAN Ramesh, 82C Yorkshire Drive, Guilderland, NY 12084, US,
  BUSHKO Wit Cezary, 118 Haswell Road, Watervliet, NY 12189, US,
  KUBOTERA Kazunao, 31 Sheffield Drive, Delmar, NY 12054, US,
  GORCZYCA Thomas B, 3059 New Williamsburg Drive, Schenectady, NY 12303, US
  WOODS Joseph, Apartment A14C, 2150 Rosa Road, Schenectady, NY 12309, US,
Legal Representative:
  SNYDER Bernard (agent), General Electric Company, 3135 Easton Turnpike
    W3C, Fairfield, CT 06431, US,
Patent and Priority Information (Country, Number, Date):
                        WO 200048172 A2 20000817 (WO 0048172)
  Patent:
                        WO 2000US3644 20000211 (PCT/WO US0003644)
  Application:
  Priority Application: US 99120101 19990212; US 99134585 19990517; US
    99137883 19990607; US 99137884 19990607; US 99146248 19990729
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH
  GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN
  MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 18524
Fulltext Availability:
  Detailed Description
Detailed Description
     202 disposed over a portion or all of the core.
```

Conventional substrates, e.g., aluminum and ceramic substrates without a plastic overlay, have a very high stiffness (e.g., aluminum with a Young's modulus of about 70 gigapascals (GPa), and ceramic with a Young's modulus of about 200 GPa), a level above that which has been achieved with plastic substrates. It was unexpectedly found that the damping coefficient of a material is important to offset the decreased

stiffness of plastic substrates as compared to aluminum. Consequently, in order to minimize effects of vibration of the disk, the visco-elastic material...

...spring/dashpot assembly between a vibration source and an object to be vibrated. For effective damping, the material should absorb and/or dissipate the energy of vibration transmitted through the material as energy...

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File
       9:Business & Industry(R) Jul/1994-2007/Nov 30
         (c) 2007 The Gale Group
      15:ABI/Inform(R) 1971-2007/Dec 08
File
         (c) 2007 ProQuest Info&Learning
      16:Gale Group PROMT(R) 1990-2007/Dec 05
File
         (c) 2007 The Gale Group
      20:Dialog Global Reporter 1997-2007/Dec 10
File
         (c) 2007 Dialog
      47: Gale Group Magazine DB (TM) 1959-2007/Nov 21
File
         (c) 2007 The Gale group
     75:TGG Management Contents(R) 86-2007/Nov W3
File
         (c) 2007 The Gale Group
File
      80:TGG Aerospace/Def.Mkts(R) 1982-2007/Nov 29
         (c) 2007 The Gale Group
     88:Gale Group Business A.R.T.S. 1976-2007/Nov 28
File
         (c) 2007 The Gale Group
     98:General Sci Abs 1984-2007/Nov
File
         (c) 2007 The HW Wilson Co.
File 112:UBM Industry News 1998-2004/Jan 27
         (c) 2004 United Business Media
File 141:Readers Guide 1983-2007/Oct
         (c) 2007 The HW Wilson Co
File 148:Gale Group Trade & Industry DB 1976-2007/Nov 29
         (c) 2007 The Gale Group
File 160: Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 275: Gale Group Computer DB(TM) 1983-2007/Dec 06
         (c) 2007 The Gale Group
File 264:DIALOG Defense Newsletters 1989-2007/Sep 21
         (c) 2007 Dialog
File 369: New Scientist 1994-2007/Sep W4
         (c) 2007 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
File 484:Periodical Abs Plustext 1986-2007/Dec W1
         (c) 2007 ProQuest
File 553: Wilson Bus. Abs. 1982-2007/Nov
         (c) 2007 The HW Wilson Co
File 570:Gale Group MARS(R) 1984-2007/Dec 03
         (c) 2007 The Gale Group
File 608:KR/T Bus.News. 1992-2007/Dec 10
         (c)2007 Knight Ridder/Tribune Bus News
File 620:EIU:Viewswire 2007/Dec 07
         (c) 2007 Economist Intelligence Unit
File 613:PR Newswire 1999-2007/Dec 10
         (c) 2007 PR Newswire Association Inc
File 621:Gale Group New Prod.Annou.(R) 1985-2007/Nov 29
         (c) 2007 The Gale Group
File 623:Business Week 1985-2007/Dec 10
         (c) 2007 The McGraw-Hill Companies Inc
File 624:McGraw-Hill Publications 1985-2007/Dec 07
         (c) 2007 McGraw-Hill Co. Inc
File 634:San Jose Mercury Jun 1985-2007/Dec 07
         (c) 2007 San Jose Mercury News
File 635: Business Dateline(R) 1985-2007/Dec 07
         (c) 2007 ProQuest Info&Learning
File 636:Gale Group Newsletter DB(TM) 1987-2007/Dec 06
         (c) 2007 The Gale Group
File 647:CMP Computer Fulltext 1988-2007/Nov W4
         (c) 2007 CMP Media, LLC
File 696:DIALOG Telecom. Newsletters 1995-2007/Dec 06
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(c) 2007 Dialog
File 674: Computer News Fulltext 1989-2006/Sep W1
         (c) 2006 IDG Communications
File 810:Business Wire 1986-1999/Feb 28
         (c) 1999 Business Wire
File 813:PR Newswire 1987-1999/Apr 30
         (c) 1999 PR Newswire Association Inc
File 587: Jane's Defense & Aerospace 2007/Nov W4
         (c) 2007 Jane's Information Group
Set
        Items
                Description
S1
          987
                GIGAPASCAL??
                S1(3N)(10 OR TEN)
S2
           88
                DAMP? (3N) (CAPACIT? OR CAPABILIT?)
S3
         1507
S4
          302
                GREATER (1W) 0 () 02
S5
         2756
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S6
         3930
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S7
         3161
                COEFFICIENT? OR RESTITUTION
S8
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                (DISC OR DISK OR HARD) (3N) DRIVE?? OR HDD
       758398
S9
                (HEAD OR SLIDER OR TRANSDUCER OR PICKUP) (3N) SUSPENSION
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S10
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                GIMBAL
S11
$12
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       132162
S13
                EPOXY() RESIN OR POLYETHER() URETHANE? OR POLYETHERURETHANE -
S14
      1749925
             OR RUBBER OR SILICONE() RUBBER OR POLYVINYLCHLORIDE? OR POLYVI-
             NYL()CHLORIDE? OR POLYBUTADIENE?
       308993
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S16
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S17
S18
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S19
                AU=(SASSINE, J? OR BHATTACHARYA, S? OR HUTCHINSON, A? OR L-
         1063
S20
             IMMER, J? OR SASSINE J? OR BHATTACHARYA S? OR HUTCHINSON A? OR
              LIMMER J?)
                LOAD()BEAM
S21
           63
                S18 NOT MISOCYCLONE
S22
            0
S23
            0
                S2(S)S4
            0
                S2(S)(S3 OR S6 OR S12)
S24
                S2(S)(S13 OR S14 OR S15)
S25
            0
            6
                S2(S)(S16 OR S17)
S26
S27
            2
                RD S26 (unique items)
                S20 AND S2
            0
S28
                S20(S)(S3 OR S6 OR S12)
S29
            0
                (S3 OR S6 OR S12)(S)S4
            0
S30
            0
                S2(S)S21
S31
S32
            1
                S2(S)S5
            0
                S2(S)S6
S33
            0
                S7(S)S8(S)S1
S34
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           75
S35
            0
S36
                S35(S)S9:S11
S37
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S38
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                S35(S)S8
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S41
                S35(S)S21
            0
S42
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S43
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S44
                SEAGATE
                S44(S)S2
S45
            0
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0

S46

S44(S)S1

27/3,K/1 (Item 1 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2007 The Gale group. All rts. reserv.

05164333 SUPPLIER NUMBER: 19469388 (USE FORMAT 7 OR 9 FOR FULL TEXT) Silicon and oxygen self-diffusivities in silicate liquids measured to 15 gigapascals and 2800 kelvin.

Poe, Brent T.; McMillan, Paul F.; Rubie, David C.; Chakraborty, Sumit; Yarger, Jeff; Diefenbacher, Jason Science, v276, n5316, p1245(4)

May 23, 1997

ISSN: 0036-8075 LANGUAGE: English RECORD TYPE: Fulltext; Abstract WORD COUNT: 2866 LINE COUNT: 00234

...AUTHOR ABSTRACT: atoms. For highly polymerized aluminosilicate liquids, oxygen diffusivities pass through a maximum at pressures below 10 gigapascals, whereas up to 15 gigapascals diffusivities continue to increase for sodium tetrasilicate liquid. A diffusivity maximum indicates a change in the mechanism of formation of 5-coordinated silicon or aluminum in the liquid. In the case of aluminosilicate liquids, this mechanism is restricted to aluminum sites in the network, suggesting that not only degree of polymerization, but also the ratio of aluminum to aluminum plus silicon strongly influences the behavior of magmatic processes at depth.

27/3,K/2 (Item 1 from file: 370)
DIALOG(R)File 370:Science
(c) 1999 AAAS. All rts. reserv.

#### 00509762

Alumina in the Lower Mantle

Science Vol. 284 No. 5415 pp. 7091

Publication Date: 04/30/1999 (990430) Publication Year: 1999

Document Type: Journal ISSN: 0036-8075

Language: English

Section Heading: This Week in Science

Word Count: 116

...Summary: Fe)SiO3 perovskite, the most abundant mineral in the lower mantle, because the amount of aluminum in the perovskite can constrain the amount of iron. Unfortunately, the equation of state of...

...of state of a MgSiO3 perovskite with 5 mole % Al 2O3 to a pressure of 10 gigapascals . They found that the alumina-enriched perovskite is more compressible than the MgSiO3 perovskite, an...

32/3,K/1 (Item 1 from file: 369)

DIALOG(R) File 369: New Scientist

(c) 2007 Reed Business Information Ltd. All rts. reserv.

00124350 16422162.700 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Crystal fix

· ....

SAMPLE, IAN

New Scientist, vol. 164, no. 2216, p. 17

December 11, 1999

LANGUAGE: English RECORD TYPE: Fulltext DOC. TYPE: Journal

WORD COUNT: 520

(USE FORMAT 7 OR 9 FOR FULLTEXT)

#### TEXT:

...heal.

Human bone has a Young's modulus--a measure of its stiffness--of between 10 and 30 gigapascals, while the usual supporting steel rods offer very high stiffness of 220 gigapascals. But this can sometimes be too stiff--causing damage to the bone..

```
File 344: Chinese Patents Abs Jan 1985-2006/Jan
          (c) 2006 European Patent Office
File 347: JAPIO Dec 1976-2007/Jun (Updated 070926)
          (c) 2007 JPO & JAPIO
File 350:Derwent WPIX 1963-2007/UD=200779
         (c) 2007 The Thomson Corporation
Set
        Items
                Description
          100
                GIGAPASCAL??
Sl
S2
            6
                S1(3N)(10 OR TEN)
               DAMP?(3N)(CAPACIT? OR CAPABILIT?)
S3
         1385
S4
          275
                GREATER (1W) 0 () 02
         2807
                HIGH()STIFFNESS
S5
               HIGH (3N) DAMP???
S6
         7466
       14724 (MODULUS OR MODULI OR YOUNG) (3N) ELASTICITY
246580 COEFFICIENT? OR RESTITUTION
107457 (DISC OR DISK OR HARD) (3N) DRIVE?? OR HDD
3886 (HEAD OR SLIDER OR TRANSDUCER OR PICKUP) (3N) SUSPENSION
S7
S8
S9
S10
               GIMBAL
S11
         6303
               DAMPING (3N) MATERIAL??
S12
         9215
       351555 POLYIMIDE? OR POLYAMIDE? OR POLYURETHANE?
S13
S14
       614598 EPOXY()RESIN OR POLYETHER()URETHANE? OR POLYETHERURETHANE -
             OR RUBBER OR SILICONE() RUBBER OR POLYVINYLCHLORIDE? OR POLYVI-
             NYL()CHLORIDE? OR POLYBUTADIENE?
S15
       117491 PI OR PVC OR PU
S16
       111481
                STAINLESS () STEEL
S17
       325082
                ALUMINUM
S18
            0
                ZETA()0()02
S19
            3
                QUIET()STEEL OR STAR()SILENT()STEEL
                AU=(SASSINE, J? OR BHATTACHARYA, S? OR HUTCHINSON, A? OR L-
S20
          284
             IMMER, J? OR SASSINE J? OR BHATTACHARYA S? OR HUTCHINSON A? OR
              LIMMER J?)
         1967
               LOAD () BEAM
S21
S22
                S19 AND IC=G11B?
            n
                S20 AND S1
S23
            0
                S20 AND S4
S24
            ٥
S25
                S20 AND (S3 OR S6 OR S12)
            3
            6 S2 NOT S25
S26
S27
            1 S1 AND (S3 OR S6 OR S12)
            1 S27 NOT (S2 OR S25)
S28
        3942 (S3 OR S6 OR S12) AND (S13 OR S14 OR S15)
S29
          46 S29 AND (S9 OR S10 OR S11)
S30
           17 S30 AND (S4 OR S5 OR S6 OR S7 OR S8)
S31
                S31 NOT (S27 OR S2 OR S25)
           17
S32
           5
                S32 AND IC=G11B?
S33
           5
                S33 NOT AD=20040227:20071210/PR
S34
                S32 NOT S34
           12
S35
           8
                S35 NOT AD=20040227:20071210/PR
S36
           1 (S3 OR S6 OR S12) AND S4
S37
                S37 NOT (S31 OR S27 OR S2 OR S25)
S38
           1
          267 (S9 OR S10 OR S11) AND (S3 OR S6 OR S12)
S39
S40
           5
                S39 AND S5
           4 S40 NOT (S37 OR S31 OR S27 OR S2 OR S25)
S41
                S41 NOT AD=20040227:20071210/PR
           2
S42
                S39 AND S1
S43
```

25/3,K/1 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2007 The Thomson Corporation. All rts. reserv.

0015278493 - Drawing available WPI ACC NO: 2005-628616/200564

XRPX Acc No: N2005-516139

Disc drive e.g. hard drive, head suspension assembly for computer system, has hinge and gimbal components, where one of components is made from damping material with high stiffness and damping capacity

Patent Assignee: SEAGATE TECHNOLOGY LLC (SEAG-N)

Inventor: BHATTACHARYA S ; HUTCHINSON A J ; LIMMER J D ; SASSINE J H

Patent Family (1 patents, 1 countries)
Patent Application

Number Kind Date Number Kind Date Update
US 20050190502 A1 20050901 US 2004788863 A 20040227 200564 B

Priority Applications (no., kind, date): US 2004788863 A 20040227

## Patent Details

Number Kind Lan Pg Dwg Filing Notes US 20050190502 A1 EN 11 4

...for computer system, has hinge and gimbal components, where one of components is made from damping material with high stiffness and damping capacity

## Original Titles:

Head suspension assembly having a high damping high stiffness component

Inventor: BHATTACHARYA S ...

... HUTCHINSON A J ...

... LIMMER J D ...

... SASSINE J H

Alerting Abstract ...head. One of the hinge component and the gimbal component is made from a structural damping material having high stiffness and high damping capacity....ADVANTAGE - One of the hinge and gimbal components is made from structural damping material having high stiffness and high damping capacity, thus reducing vibration resonance without sacrificing overall stiffness of the assembly...

Original Publication Data by Authority

Inventor name & address:
 Sassine, Joseph H ...

- ... Bhattacharya, Sandeepan ...
- ... Hutchinson, Andrew J ...

... Limmer, Joel D

Original Abstracts:

...least one of the hinge component and the gimbal component is made from a structural damping material having high stiffness and high damping capacity.

#### Claims:

...one of the hinge component and the gimbal component is made from a first structural damping material having high stiffness and high damping capacity.

25/3,K/2 (Item 2 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2007 The Thomson Corporation. All rts. reserv.

0015182431 - Drawing available WPI ACC NO: 2005-532023/200554

XRPX Acc No: N2005-435610

Head suspension for use in data storage device, has laser beam region that is adjacent to bend region, has damping material support structure which extends from strut into aperture of bend region

Patent Assignee: BHATTACHARYA S. (BHAT-I); HAMMEL B D (HAMM-I); MCREYNOLDS D P (MCRE-I); NARAYAN S H (NARA-I); RENKEN F P (RENK-I)

Inventor: BHATTACHARYA S ; HAMMEL B D; MCREYNOLDS D P; NARAYAN S H; RENKEN F P

Patent Family (1 patents, 1 countries)

Patent Application

Number Kind Date Number Kind Date Update US 20050157427 Al 20050721 US 2004758390 A 20040115 200554 B

Priority Applications (no., kind, date): US 2004758390 A 20040115

#### Patent Details

Number Kind Lan Pg Dwg Filing Notes US 20050157427 Al EN 7 4

...in data storage device, has laser beam region that is adjacent to bend region, has damping material support structure which extends from strut into aperture of bend region

Inventor: BHATTACHARYA S ...

Alerting Abstract ...strut (144) and aperture bounded by strut and mounting region. The laser beam region having damping material support structure, is adjacent to the bend region. The damping material support structure extends from the strut into the aperture...potential exposure of the read/write head and the disk to adhesive medium of the damping material, is reduced by extending the damping material support structure into the aperture...

...138 large damping material

Original Publication Data by Authority

Inventor name & address:

... Bhattacharya, Sandeepan

Original Abstracts:

...from the bend region to form an aperture, a strut, an isolation aperture and a damping material support structure; and affixing a damping material to the strut and the damping material support structure. The apparatus includes the bend region adjacent both the mounting region and the load beam region, with the damping material attached to the strut as well as to the damping material support structure. The load beam region includes a rigid portion, which supports a flexure upon... Claims:

...by the bend member and the mounting region; anda load beam region with a damping material support structure adjacent the bend member, the damping material support structure offset from the bend member and extending into the aperture.

25/3,K/3 (Item 3 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2007 The Thomson Corporation. All rts. reserv.

0014751241 - Drawing available WPI ACC NO: 2005-098872/200511 XRPX Acc No: N2005-085749

Slider supporting suspension for disc drive, has flexible beam section with extended, peak strain region, and damper covering portion of peak strain

region and placed over areas of high strain energies

Patent Assignee: SEAGATE TECHNOLOGY LLC (SEAG-N)

Inventor: HUTCHINSON A J

Patent Family (2 patents, 1 countries)

Patent Application

Update Number Kind Date Number Kind Date US 2003607756 20030627 200511 B 20041230 US 20040264054 A1 Α A 20030627 200641 E 20060620 US 2003607756 US 7064931 B2

Priority Applications (no., kind, date): US 2003607756 A 20030627

#### Patent Details

Number Kind Lan Pg Dwg Filing Notes US 20040264054 A1 EN 8 5

Inventor: HUTCHINSON A J

...164) covers a portion of the peak strain region and is placed over areas of high strain energies. The damper includes a damping material made of a viscoelastic polymer that is a pressure sensitive adhesive.

Original Publication Data by Authority

Inventor name & address:
 Hutchinson, Andrew John ...

... Hutchinson, Andrew John

26/3,K/1 (Item 1 from file: 347)

DIALOG(R) File 347: JAPIO

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01610833

MOLDED ITEM OF ULTRA-HIGH-MOLECULAR WEIGHT POLYPROPYLENE

PUB. NO.: 60-089333 [JP 60089333 A]

PUBLISHED: May 20, 1985 (19850520)

INVENTOR(s): KANEMOTO TETSUO

TSURUTA MEIJI TANAKA KOJI TAKEDA MASATAMI

APPLICANT(s): TOUNEN SEKIYU KAGAKU KK [359451] (A Japanese Company or

Corporation), JP (Japan)

APPL. NO.: 58-196130 [JP 83196130] FILED: October 21, 1983 (19831021)

JOURNAL: Section: M, Section No. 415, Vol. 09, No. 235, Pg. 4,

September 21, 1985 (19850921)

#### ABSTRACT

...ultra-high-molecular weight polypropylene molded item having a tensional modulus of not less than 10 gigapascals and a breaking strength of 0.6 gigapascals and more can be obtained. Therefore it...

26/3,K/2 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2007 The Thomson Corporation. All rts. reserv.

0016916555 - Drawing available WPI ACC NO: 2007-631621/200760

XRAM Acc No: C2007-224155 XRPX Acc No: N2007-493163

Heater for thermogenesis for non-catalytic combination or sintering of e.g. diamond, cubic-crystal boron nitride, includes graphite main body to which ultra high pressure can be applied, and contains predetermined amount of boron

Patent Assignee: SUMITOMO ELECTRIC IND LTD (SUME)

Inventor: SUMIYA H

Patent Family (1 patents, 1 countries)
Patent Application

Number Kind Date Number Kind Date Update
JP 2007207550 A 20070816 JP 200624318 A 20060201 200760 B

Priority Applications (no., kind, date): JP 200624318 A 20060201

#### Patent Details

Number Kind Lan Pg Dwg Filing Notes JP 2007207550 A JA 7 1

Alerting Abstract ...resistivity that is less than or equal to 0.1 Ohmscm at a pressure of 10 gigapascals or more and at a temperature of 1800 (deg) C of more...generate a high heating temperature of 1800 (deg) C or more at a pressure of 10 gigapascals or more, without the need of temperature monitoring by maintaining electric power settings made during

DIALOG(R) File 350: Derwent WPIX

(c) 2007 The Thomson Corporation. All rts. reserv.

0015667093

WPI ACC NO: 2006-231277/200624

XRAM Acc No: C2006-075904 XRPX Acc No: N2006-198482

Thin film, useful as low constant dielectric films in integrated circuits, comprises a composition obtained by polymerizing a silicon containing monomer to form a siloxane material

Patent Assignee: HACKER N (HACK-I); HADZIC A (HADZ-I); KYLMA J (KYLM-I); PAULASAARI J (PAUL-I); PIETIKAINEN J (PIET-I); RANTALA J T (RANT-I); SILECS OY (SILE-N); TORMANEN T T (TORM-I)

Inventor: HACKER N; HADZIC A; KYLMA J; KYLMAE J; PAULASAARI J; PIETIKAEINEN
J; PIETIKAINEN J; RANTALA J T; TOERMAENEN T T; TORMANEN T T; RANTALA J;
TOERMAENEN T

Patent Family (3 patents, 110 countries)

Application Patent Kind Number Kind Date Update Number Date 200624 A1 20060309 WO 2005FI373 A 20050831 В WO 2006024693 200624 E A1 20060316 US 2004605553 P 20040831 US 20060058487 US 2005644304 P 20050118

US 2005644304 P 20050118
US 2005215303 A 20050831

EP 1787319 A1 20070523 EP 2005777305 A 20050831 200735 E WO 2005FI373 A 20050831

Priority Applications (no., kind, date): US 2004605553 P 20040831; US 2005644304 P 20050118; US 2005215303 A 20050831

#### Patent Details

Number Kind Lan Pg Dwg Filing Notes

WO 2006024693 Al EN 45 2

National Designated States, Original: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NA NG NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Regional Designated States, Original: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IS IT KE LS LT LU LV MC MW MZ NA NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW

US 20060058487 A1 EN

Related to Provisional US 2004605553 Related to Provisional US 2005644304 PCT Application WO 2005FI373

Based on OPI patent WO 2006024693
Regional Designated States, Original: AT BE BG CH CY CZ DE DK EE ES FI FR

GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR Technology Focus

EP 1787319

...g/mol, where M is silicon and O is oxygen; a modulus of 8 (preferably 10 ) gigapascal or more; and a density of 1.2 (preferably 1.65) g/cm3 or more...

26/3,K/4 (Item 3 from file: 350)

A1 EN

DIALOG(R) File 350: Derwent WPIX

(c) 2007 The Thomson Corporation. All rts. reserv.

0014018589 - Drawing available WPI ACC NO: 2004-200240/200419

XRAM Acc No: C2004-079247 XRPX Acc No: N2004-158869 Reducing image defects in electrostatographic image for discharged or charged area development, by using primary imaging member having outermost

layer of silicon carbide having specified Young's modulus

Patent Assignee: NEXPRESS SOLUTIONS LLC (NEXP-N)
Inventor: BORSENBERGER P M; RIMAI D S; VISSER S A

Patent Family (1 patents, 1 countries)

Patent Application

Number Kind Date Number Kind Date Update
US 6649314 B1 20031118 US 2000506159 A 20000217 200419 B

Priority Applications (no., kind, date): US 2000506159 A 20000217

#### Patent Details

Number Kind Lan Pg Dwg Filing Notes

US 6649314 B1 EN 11 2

Original Publication Data by Authority

## Claims:

...silicon carbide in said outermost layer having a Young's modulus of at least about 10 gigapascals; imagewise exposing said primary imaging member at said exposing station, thereby forming a latent image on said imaging member; developing said latent image with...

26/3,K/5 (Item 4 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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0009991473 - Drawing available 'WPI ACC NO: 2000-294849/200026

XRAM Acc No: C2000-089263 XRPX Acc No: N2000-221194

Building work reinforcement fabric has high modulus warps and wefts coated with thermo adhesive material to give improved binding

Patent Assignee: CREDALI L (CRED-I)

Inventor: CREDALI L

Patent Family (5 patents, 25 countries)

Application Patent. Update Number Kind Date Number Kind Date A 19991007 200026 В EP 994223 20000419 EP 1999119833 A1 200215 E A 19981013 В 20000929 IT 1998MI2195 IT 1302656 200582 E A 19991007 B1 20051207 EP 1999119833 EP 994223 A 19991007 200613 E DE 69928741 E 20060112 DE 69928741 EP 1999119833 A 19991007 A 19991007 200654 E T2 20060810 DE 69928741 DE 69928741 EP 1999119833 A 19991007

Priority Applications (no., kind, date): IT 1998MI2195 A 19981013; EP 1999119833 A 19991007

## Patent Details

Number Kind Lan Pg Dwg Filing Notes

EP 994223 A1 EN 17 6

Regional Designated States, Original: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

EP 994223 B1 EN

Regional Designated States, Original: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

Application EP 1999119833 DE 69928741 DE Based on OPI patent EP 994223 Application EP 1999119833 DE 69928741 T2 DE Based on OPI patent EP 994223

# Original Publication Data by Authority

#### Claims:

...die Kette aus Faden (11) aus hochmodulen Fasern mit einem Elastizitatsmodul unter Zugbeanspruchung grosser als 10 GPa (Gigapascal ) und mit einer Zugfestigkeit grosser als 600 MPa (Megapascal) besteht und welches <br/>b>dadurch gekennzeichnet ist, dass</b> der Schuss aus Glasfaden (12...

...11) de fibres a modules eleves, ayant un coefficient d'elasticite sous tension superieur a 10 GPa (gigapascal) et une limite elastique a la tension superieure a 600 MPa (megapascal), et <b >caracterise en ce que</b> la trame est constituee de fils de verre (12) revetus d'une matiere polymere thermo-collant...

26/3,K/6 (Item 5 from file: 350) DIALOG(R) File 350: Derwent WPIX

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0003389266

WPI ACC NO: 1985-156847/198526

XRAM Acc No: C1985-068613

Ultrahigh mol. wt. polypropylene moulding - with extremely high tensile

elastic modulus and breaking strength

Patent Assignee: TONEN SEKIYU KAGAKU KK (TNEN)

Inventor: KANEMOTO T; TAKEDA M; TANAKA K; TSURUTA M

Patent Family (2 patents, 1 countries)

Application Patent

Number Kind Date Number Kind Date Update JP 60089333 Α 19850520 JP 1983196130 A 19831021 198526 В 19910620 JP 1983196130 A 19831021 199129 E JP 1991041055

Priority Applications (no., kind, date): JP 1983196130 A 19831021

Patent Details

Pg Dwg Filing Notes Kind Lan Number JP 60089333 JΑ

Alerting Abstract ...av. mol. wt. of 1,000,000 or more, and its tensile elastic modulus is 10 qiqapascal or more and its breaking strength, 0.6 gigapascal or more. Or the tensile elastic...

28/3,K/1 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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0011119691 - Drawing available WPI ACC NO: 2002-055892/200208

XRPX Acc No: N2002-041193

Method of sound control for a building construction, using sheets of material positioned together, at least one sheet being high density gypsum fiber board, and another being plaster board

Patent Assignee: FLETCHER BUILDING HOLDINGS LTD (FLET-N); FLETCHER

CHALLENGE LTD (FLET-N)

Inventor: GOLDING K J; HALLOWS R M
Patent Family (3 patents, 2 countries)
Patent Application

Update Kind Date Number Kind Date Number A 20010319 200208 B AU 200128096 AU 200128096 Α 20010920 A 20000317 200272 E 20020927 NZ 503475 NZ 503475 Α A 20010319 200638 E B2 20051117 AU 200128096 AU 783624

Priority Applications (no., kind, date): NZ 505069 A 20000609; NZ 503475 A 20000317

#### Patent Details

Number Kind Lan Pg Dwg Filing Notes AU 200128096 A EN 26 11

NZ 503475 A EN

Alerting Abstract ...a thickness of 5 - 20 mm, and the flexural stiffness should be 1.5 - 5 gigapascals .

...INDEPENDENT CLAIM is given for a multi-layer assembly of sheets of material to provide inter surface damping in a building construction

(Item 1 from file: 350) 34/3, K/1

DIALOG(R) File 350: Derwent WPIX

(c) 2007 The Thomson Corporation. All rts. reserv.

0014772346 - Drawing available WPI ACC NO: 2005-120011/200513

XRAM Acc No: C2005-039955 XRPX Acc No: N2005-103494

Data storage medium for internal disk drives comprises a substrate

containing at least one polyimide

Patent Assignee: GENERAL ELECTRIC CO (GENE)

Inventor: CELLA J; CELLA J A; DRIS I; HERMANN E D; HERRMANN E; HERRMANN E D

; KERBOUA R; REITZ J; REITZ J B

Patent Family (8 patents, 107 countries)

					-				
Pat	ent			App	plication				
Number		Kind	Date	Nur	mber	Kind	Date	Update	
US	20040265605	A1	20041230	US	2003603497	Α	20030624	200513	В
WO	2005005515	A1	20050120	WO	2004US18519	A	20040610	200513	E
EΡ	1641861	A1	20060405	ΕP	2004754951	A	20040610	200624	$\mathbf{E}$
				WO	2004US18519	Α	20040610		
ΑŲ	2004256057	A1	20050120	ΑU	2004256057	Α	20040610	200660	E
KR	2006064573	Α	20060613	WO	2004US18519	Α	20040610	200674	$\mathbf{E}$
				KR	2005724848	Α	20051223		
US	7147906	B2	20061212	US	2003603497	Α	20030624	200701	E
CN	1835989	A	20060920	CN	200480023362	2 A	20040610	200706	E
JΡ	2007526587	W	20070913	WO	2004US18519	Α	20040610	`200762	E
				JР	2006517217	Α	20040610		

Priority Applications (no., kind, date): US 2003603497 A 20030624

# Patent Details

Dwg Filing Notes Number Kind Lan Pg

US 20040265605 A1 EN 11

WO 2005005515 A1 EN

National Designated States, Original: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Regional Designated States, Original: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI

SK SL SZ TR TZ UG ZM ZW

EP 1641861 A1 EN PCT Application WO 2004US18519 Based on OPI patent WO 2005005515

Regional Designated States, Original: AT BE BG CH CY CZ DE DK EE ES FI FR

GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR Based on OPI patent WO 2005005515 AU 2004256057 A1 EN KR 2006064573 PCT Application WO 2004US18519 Α KO Based on OPI patent WO 2005005515

PCT Application WO 2004US18519 JP 2007526587 W JA 20

Based on OPI patent WO 2005005515

drives comprises a substrate Data storage medium for internal disk containing at least one polyimide

#### Original Titles:

DATENTRAGER BEINHALTEND POLYIMIDE

...DATA STORAGE MEDIUM COMPRISING POLYIMIDES

...SUPPORT DE STOCKAGE DE DONNEES COMPRENANT DES POLYIMIDES ...Data storage medium comprising polyimides ...Data storage medium comprising polyimides ...DATA STORAGE MEDIUM COMPRISING POLYIMIDES ...SUPPORT DE STOCKAGE DE DONNEES COMPRENANT DES POLYIMIDES Alerting Abstract ... NOVELTY - A storage medium comprises a substrate having a physical portion of at least one polyimide, and at least one data layer on the substrate.DESCRIPTION - A storage medium comprises a substrate having a physical portion of at least one polyimide, and at least one data layer on the substrate. The polyimide comprises structural units of formula (I... ... USE - As a storage medium for storing data (claimed) in vibration damping materials useful in e.g. automobiles, printed circuit boards and drive applications... spindle motors in internal disk ... ADVANTAGE - The composition has a mechanical damping coefficient at a frequency of about 1.6 hertz of at least 0.019 at about... Technology Focus POLYMERS - Preferred Components: The polyimide composition is a miscible blend comprising a second polyimide . Extension Abstract ...phenylenediamine instead of the mixture (BPADA) and 3,3'-dimethyl-4,4'-diamino biphenyl. The polyimides were tested for mechanical damping coefficient (Tq), damping coefficients (tan delta) at 25, 50 and 100(deg)C and maximum tan delta value. The... Title Terms.../Index Terms/Additional Words: POLYIMIDE Class Codes International Classification (+ Attributes) IPC + Level Value Position Status Version ... G11B-0005/62 ... ... G11B-0005/73 ... ... G11B-0007/24 ... ... G11B-0005/73 ... ... G11B-0007/253 ... G11B-0005/62 ...

... G11B-0007/24 ...

... G11B-0005/62 ...

## Original Publication Data by Authority

# Original Abstracts:

- ...storage medium comprising: a) a substrate, a physical portion of which comprises at least one polyimide, and b) at least one data layer on the substrate. The substrate comprising a polyimide exhibits low axial displacement and beneficial damping characteristics...
- ...storage medium comprising: a) a substrate, a physical portion of which comprises at least one **polyimide**, and b) at least one data layer on the substrate. The substrate comprising a **polyimide** exhibits low axial displacement and beneficial damping characteristics...
- ...storage medium comprising: a) a substrate, a physical portion of which comprises at least one polyimide, and b) at least one data layer on the substrate. The substrate comprising a polyimide exhibits low axial displacement and beneficial damping characteristics...
- ...storage medium comprising: a) a substrate, a physical portion of which comprises at least one **polyimide**, and b) at least one data layer on the substrate. The substrate comprising a **polyimide** exhibits low axial displacement and beneficial damping characteristics...
- ...stockage de donnees comprenant: a) un substrat dont une partie physique comprend au moins un **polyimide**, et; b) au moins une couche de stockage de donnees qui se trouve sur ledit substrat. Ce substrat, qui comprend un **polyimide**, presente des caracteristiques telles qu'un faible deplacement axial et un amortissement favorable. Claims:
- ...storage medium comprising:a) a substrate, a physical portion of which comprises at least one **polyimide**, andb) at least one data layer on the substrate; the at least one **polyimide** comprising structural units of the formula: [C00012] wherein "A" comprises structural units of the formulae...
- ...storage medium comprising: a) a substrate, a physical portion of which comprises at least one polyimide, andb) at least one data layer on the substrate; wherein said polyimide has a mechanical damping coefficient of at least about 0.028 at a temperature of about 50 (deg) C. at a frequency of about 1.6 hertz; and wherein the at least one polyimide comprising structural units of the formula: [CF C00012] wherein "A" comprises structural units of the...

34/3,K/2 (Item 2 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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0009773404 - Drawing available WPI ACC NO: 2000-060978/200005

XRPX Acc No: N2000-047712

Acoustic noise emission controller for disc drive used in data

recording from magnetic disc

Patent Assignee: SEAGATE TECHNOLOGY INC (SEAG-N)

Inventor: MYLABATHULA E; WOLDEMAR C M
Patent Family (1 patents, 1 countries)
Patent Application

Number Kind Date Number Kind Date Update

US 5982580 A 19991109 US 1995503808 A 19950718 200005 B US 1997887973 A 19970703

Priority Applications (no., kind, date): US 1995503808 A 19950718; US 1997887973 A 19970703

#### Patent Details

Number Kind Lan Pg Dwg Filing Notes
US 5982580 A EN 7 3 Division of application US 1995503808

Acoustic noise emission controller for disc drive used in data recording from magnetic disc

# Original Titles:

Acoustic noise control in a disc drive .

Alerting Abstract ...between the PCB (16) and the bottom case (14). The gasket includes thick open coil polyurethane foam selected for its high damping characteristics. The gasket is compressed between 25-30% of its free standing height to damper...

USE - For controlling acoustic noise emission in disc drive used in recording of data from magnetic disc...

...ADVANTAGE - Enables easy fixation of top cover in **disc drive** without additional expense. Reduces noise created by PCB suspended below bottom surface of **disc drive**. Prevents nuisance tripping of shock sensor that is used in portable **disc drive**.

...DESCRIPTION OF DRAWINGS - The figure shows the exploded perspective view of housing of disc drive .

#### Class Codes

International Classification (Main): G11B-033/14

Original Publication Data by Authority

#### Original Abstracts:

A noise damping system for a disc drive wherein the cover of the disc drive can be made or stamped out of a stainless steel constrained layer of viscoelastic damping material. The material of the cover consists of two layers of stainless steel with a thin layer of damping material sandwiched between. A foam material between the base section of the housing and the printed circuit board located below the...

## Claims:

In a disc drive system having recording media within a sealed housing having top and bottom casing members, a read write...

...recording media and a printed circuit board supported below the bottom casing member of said disc drive, the improvement comprising a semi-perimeter foam gasket located in an air space between said printed circuit...

...vibrations of said printed circuit board and said foam gasket comprising a thick open cell polyurethane foam selected for its high damping characteristics thereby reduce noise on said disc drive.>

34/3,K/3 (Item 3 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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0009647941 - Drawing available WPI ACC NO: 1999-600169/199951

XRPX Acc No: N1999-442350

Box shaped part for damping noise from hard disk drives, especially SCSI type hard disks - has hard disk supported inside box on supports that maintain gap for air circulation

Application

Patent Assignee: LAP POWER AB (LAPP-N)

Inventor: PERSSON C L U W

Patent Family (1 patents, 1 countries)

Patent

Number Kind Date Number Kind Date Update SE 199800721 A 19990905 SE 1998721 A 19980304 199951 B

Priority Applications (no., kind, date): SE 1998721 A 19980304

Patent Details

Number Kind Lan Pg Dwg Filing Notes

SE 199800721 A SV 13 5

Box shaped part for damping noise from hard disk drives , especially SCSI type hard disks...

Alerting Abstract ... NOVELTY - The box-shaped part (1) contains at least two supports for the hard disk drive inserted into the box, which are used to keep it clear from the inside surfaces...

...air to flow out of. MECHANICAL ENGINEERING - PREFERRED FEATURES: The supports comprise an elastic, vibration damping material such as foamed rubber or plastic, whilst the box and its cover are made from a high density material with a high noise damping capacity, e.g. iron or steel. Alternatively the cover can be made from a different...

...a perspective view of the front section of a box-shaped part, inside which the hard disk drive is fitted. (1) Box-shaped part; (4, 5) Openings in box part cover; (6) Flange...

#### Class Codes

International Classification (+ Attributes)
IPC + Level Value Position Status Version

... G11B-0033/08 ...

... G11B-0033/14

... G11B

... G11B-0033/08 ...

... G11B-0033/14

34/3,K/4 (Item 4 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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0009175153 - Drawing available

WPI ACC NO: 1999-098695/199909

XRAM Acc No: C1999-029357 XRPX Acc No: N1999-071969

Disk drive damping arrangement - has two dampers with differing damping factors, one of which damps motion of a disk drive assemble relative to a carriage

Patent Assignee: MOTOROLA ISRAEL LTD (MOTI)
Inventor: ALON Y; INBAL N; MOSSERI Y; ZELIG A

Patent Family (1 patents, 1 countries)
Patent Application

Number Kind Date Number Kind Date Update GB 2328263 A 19990217 GB 199717232 A 19970815 199909 B

Priority Applications (no., kind, date): GB 199717232 A 19970815

#### Patent Details

Number Kind Lan Pg Dwg Filing Notes GB 2328263 A EN 18 6

Disk drive damping arrangement...

...has two dampers with differing damping factors, one of which damps motion of a disk drive assemble relative to a carriage

Alerting Abstract ...8,9-12) with different damping factors, the second of which damps motion of a disk drive assembly relative to a carriage (16...

...Also claimed is a method for cushioning a **disk drive** including providing a dummy load for increasing the **disk drive** mass. A damper is provided for damping low frequency vibration. A second damper is provided for **damping** a shock of high frequency...

...ADVANTAGE - Compensates for production tolerances of the **disk drive** and frame and temperature variation. Reduces short circuits and damage. A smaller box is required.

#### Documentation Abstract

- ...8,9-12) with different damping factors, the second of which damps motion of a disk drive assembly relative to a carriage (16...
- ...Also claimed is a method for cushioning a **disk drive** including providing a dummy load for increasing the **disk drive** mass. A damper is provided for damping low frequency vibration. A second damper is provided for **damping** a shock of high frequency...
- ...ADVANTAGE Compensates for production tolerances of the **disk drive** and frame and temperature variation. Reduces short circuits and damage. A smaller box is required...
- ...of elastomeric material and damp motion in different ranges of movement. The first damper is silicone rubber , cone-shaped, permits a range of motion in a cone axial plane, and exhibits a...
- ...0.5 kg. A resonant frequency of the damper is symmetrical in all directions. The disk drive assembly has a mass matched to a resonant frequency of at least one of the dampers. The second damper is a high damping rubber snubber and an inverted U-shaped cage closed on three sides limits the snubber movement. A phosphor-bronze frame provides extra mass to the disk drive. A leaf spring provides a clamp force to the disk drive and a plate holds the frame (18). The carriage has at least

one contact spring...

...PREFERRED METHOD - A side holder including a leaf spring to clamp the drive to the metal frame.

International Classification (Main): G11B-033/14

(Item 5 from file: 350) 34/3, K/5

DIALOG(R) File 350: Derwent WPIX

(c) 2007 The Thomson Corporation. All rts. reserv.

0005694708 - Drawing available WPI ACC NO: 1991-307042/199142

XRAM Acc No: C1991-133155

XRPX Acc No: N1991-235284

Optical head quide member - comprises body section engaging with heat

supported by second material which damps vibration Patent Assignee: MATSUSHITA ELEC IND CO LTD (MATU)

Inventor: GOTO S; KAWAMURA I; YAMAMOTO H Patent Family (1 patents, 1 countries) Application

Update Kind Date Number Date Number Kind JP 3205662 19910909 JP 19901224 A 19900108 199142 B Δ

Priority Applications (no., kind, date): JP 19901224 A 19900108

Alerting Abstract ... The recording and reproducing unit comprises: (A) a motor drives a disc recording medium; (b) a recording and reproducing head records information on the recording medium and...

...material comprises a metal, ceramics having rigidity. The second material comprises a resin, or hard rubber having high vibration damping capability...

## Class Codes

Patent

International Classification (+ Attributes) IPC + Level Value Position Status Version G11B-0021/02 ... G11B-0021/02 ...

36/3,K/1 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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0015201279

WPI ACC NO: 2005-551292/200556 Related WPI Acc No: 2007-795415

XRAM Acc No: C2005-166308

Flower-like nano-particle composition for rubber composition, thermoplastic elastomer composition, hard disk drive composition, or matrix composition, comprises surface layer comprising monomer units

Patent Assignee: BRIDGESTONE CORP (BRID)

Inventor: HALL J E; OZAWA Y; WANG X
Patent Family (2 patents, 1 countries)
Patent Application

 Number
 Kind
 Date
 Number
 Kind
 Date
 Update

 US 20050154117
 A1 20050714
 US 2004755648
 A 20040112
 200556
 B

 US 7205370
 B2 20070417
 US 2004755648
 A 20040112
 200728
 E

Priority Applications (no., kind, date): US 2004755648 A 20040112

## Patent Details

Number Kind Lan Pg Dwg Filing Notes US 20050154117 A1 EN 12 2

Flower-like nano-particle composition for rubber composition, thermoplastic elastomer composition, hard disk drive composition, or matrix composition, comprises surface layer comprising monomer units

Alerting Abstract ... USE - For rubber composition, thermoplastic elastomer composition, hard disk drive composition, or matrix composition (claimed...

...composition. The thermoplastic composition incorporating the flower-like nanoparticles produces molded products having heat resistance, high elasticity, excellent damping and super soft properties. A rubber composition incorporating the flower-like nanoparticles demonstrates high hysteresis, good tensile strength, strong resistance to...

#### Extension Abstract

...dropped into an acetone/isopropanol ((similar)95/5) blend, and dried. The product showed that **polybutadiene** segment had molecular weight of 56700. The flower-like particles were delaminated. The average particle...

Title Terms.../Index Terms/Additional Words: RUBBER;

36/3,K/2 (Item 2 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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## 0010535313

WPI ACC NO: 2001-137806/200114

Related WPI Acc No: 1998-193576; 1998-193690; 1999-095704; 2001-299777

XRAM Acc No: C2001-040437

New composition useful in sound management, comprises at least one substantially random interpolymer and at least one organic acid or its salts.

Patent Assignee: DOW CHEM CO (DOWC)

Inventor: BETSO S R; CLAYFIELD T E; HOENIG S M; WALTHER B W

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Patent Family (5 patents, 92 countries)
                             Application
Patent
                                            Kind
                                                  Date
                                                          Update
Number
               Kind
                      Date
                             Number
                                                          200114
                             WO 2000US15232 A 20000601
WO 2000078860
                A1 20001228
                                             A 20000601
                                                          200122 E
                    20010109 AU 200051784
AU 200051784
                Α
                                            A 19970626
                                                          200174 E
                   20011120 US 1997882819
US 6319969
                B1
                             US 1999374096
                                             Α
                                                19990812
                                                20000601 200238 E
                    20020508
                             EP 2000936469
                                             A
EP 1203053
                A1
                             WO 2000US15232
                                              Α
                                                20000601
                                                20000601 200309 E
JP 2003503529
                W
                    20030128
                             WO 2000US15232
                                              Α
                             JP 2001505614
                                             Α
                                                20000601
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Priority Applications (no., kind, date): US 1997882819 A 19970626; US 1999139999 P 19990618; US 1999374096 A 19990812

#### Patent Details

Number Kind Lan Pg Dwg Filing Notes WO 2000078860 A1 EN 56 1

National Designated States, Original: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Regional Designated States, Original: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

AU 200051784 А EN Based on OPI patent WO 2000078860 US 6319969 B1 EN C-I-P of application US 1997882819 C-I-P of patent US 5973049 PCT Application WO 2000US15232 EP 1203053 EN A1 Based on OPI patent WO 2000078860

Regional Designated States, Original: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

JP 2003503529 W JA 74 PCT Application WO 2000US15232
Based on OPI patent WO 2000078860

Alerting Abstract ...devices for modifying the sound of a drum, loudspeaker systems, composite sound walls, acoustically damped disc drive systems, mufflers, thermoformable acoustical mat compositions, sound damping units for vacuum cleaning machines, systems for reducing drag and noise of underwater vehicles, automotive headliners, sound damped auto motive enclosures such as oil pans, high heat, sound damping metal-polymer laminates, molded carpet assemblies with sound deadening backing, vibration-damping constrained-layer constructions, conveyor belts and material transfer systems, sound insulation moldable carpets, non-squeal disc brake pads, coatings for wires and similar...

# Technology Focus

...random polymer (SBR), ethylene octene co-polymer (EO), polypropylene (PP), polypropylene copolymer (CPP) and/or polyvinylchloride (PVC)). (1) and/or the second polymer are crosslinked...

36/3,K/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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## 0009730042

WPI ACC NO: 2000-015145/200002

XRAM Acc No: C2000-003232 XRPX Acc No: N2000-011924

Centipede polymers grafted with hydrogenated block copolymers and polypropylene, used to form gels used in applications requiring high

damping properties

Patent Assignee: BRIDGESTONE CORP (BRID)

Inventor: FOLTZ V J; HALL J E; MASHITA N; MASHITA S; MATSUSE T; TAKECHI H;

TAKEICHI H; TOYOSAWA S; WANG X

Patent Family (4 patents, 28 countries)

Patent			Application				
Number	Kind	Date	Number	Kind	Date	Update	
EP 955329	A1	19991110	EP 1999107308	Α	19990419	200002	В
JP 11343320	Α	19991214	JP 1999120365	Α	19990427	200009	E
CA 2270372	A1	19991106	CA 2270372	Α	19990428	200015	E
US 6054532	Α	20000425	US 199873617	Α	19980506	200027	E

Priority Applications (no., kind, date): US 199873617 A 19980506

#### Patent Details

Number Kind Lan Pg Dwg Filing Notes

EP 955329 A1 EN 16 0

Regional Designated States, Original: AL AT BE CH CY DE DK ES FI FR GB GR

IE IT LI LT LU LV MC MK NL PT RO SE SI

JP 11343320 A JA 16

CA 2270372 A1 EN

...grafted with hydrogenated block copolymers and polypropylene, used to form gels used in applications requiring high damping properties

Alerting Abstract ...and cushion materials, for reducing vibration in fans, air-conditioners, laundry machines, etc., as a damping material in portable compact disc and mini-disc players, microphone holders, hard disk drives, floppy disk drives, CD-ROM drives and optical disk drives, motors, the printer head of a word-processor and other small or middle-size printers, as an impact-reducing material in sports goods and shoes, as a super-low-hardness rubber, as a low-hardness plastic molding material, for controlling the release of fragrances, medical materials...

...ADVANTAGE - The grafted centipede polymers are soft, high - damping , high elasticity materials with heat resistance up to 100(deg)C. Original Publication Data by Authority

# Original Abstracts:

The present invention teaches a method for enabling the formation of a high damping, soft polymer gel. The method includes: reacting a poly(alkenyl benzene-co-maleimide) polymer with a maleated polyalkylene and

... The present invention teaches a method for enabling the formation of a high damping, soft polymer gel. The method includes: reacting a poly(alkenyl benzene-co-maleimide) polymer with a maleated polyalkylene and a...

36/3,K/4 (Item 4 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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0009252879

WPI ACC NO: 1999-180480/199915

XRAM Acc No: C1999-052579

Composite damping material of a porous material Patent Assignee: GORE ENTERPRISE HOLDINGS INC (GORE)

Inventor: GENTILE M M; PRINCIPE F; SUTTON S P Patent Family (8 patents, 75 countries) Patent Application Update Kind Date Number Kind Date Number WO 1999007775 A1 19990218 WO 1998US11047 A 19980529 199915 AU 199877086 Α 19990301 AU 199877086 Α 19980529 199928 19991012 US 1997908619 19970807 199949 E US 5965249 Α Α 20000524 EP 1998925050 19980529 200030 E EP 1002008 Al Α WO 1998US11047 19980529 Α CN 1266447 Α 20000913 CN 1998808048 Α 19980529 200062 Ε JP 2001512763 W 20010828 WO 1998US11047 Α 19980529 200156 Ε JP 2000506266 Α 19980529 B1 20020320 19980529 EP 1002008 EP 1998925050 Α 200221 19980529 WO 1998US11047 Α DE 69804318 E 20020425 DE 69804318 Α 19980529 200235 EP 1998925050 Α 19980529 WO 1998US11047 A 19980529

Priority Applications (no., kind, date): US 1997908619 A 19970807

## Patent Details

Number Kind Lan Pg Dwg Filing Notes WO 1999007775 Al EN 87

National Designated States, Original: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW

Regional Designated States, Original: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

AU 199877086 A EN Based on 6 EP 1002008 A1 EN PCT Appli

EN

Based on OPI patent WO 1999007775 PCT Application WO 1998US11047 Based on OPI patent WO 1999007775

Regional Designated States, Original: DE FR GB IT SE JP 2001512763 W JA 85 PCT Application

PCT Application WO 1998US11047
Based on OPI patent WO 1999007775
PCT Application WO 1998US11047
Based on OPI patent WO 1999007775

Regional Designated States, Original: DE FR GB IT SE DE 69804318 E DE Application EP

B1

Application EP 1998925050

PCT Application WO 1998US11047
Based on OPI patent EP 1002008
Based on OPI patent WO 1999007775

Composite damping material of a porous material

# Original Titles:

EP 1002008

... VIBRATION DAMPING COMPOSITE MATERIAL

...VIBRATION DAMPING COMPOSITE MATERIAL

...Vibration damping composite material .

... VIBRATION DAMPING COMPOSITE MATERIAL

Alerting Abstract  $\dots$ 1 Composite damping material comprises a porous material (2) and a second material (1) having a mechanical droop time of less than 10-4 seconds within the pores of the porous material . The

resulting damping material has a mechanical droop displacement less than 1mm, and a dynamic loss modulus master curve...

...point in the frequency range 0.1 to 105 Hz. Also claimed is such a damping material bonded to a surface susceptible to vibration. In damping vibration of a surface of a disc drive assembly, vehicle, aircraft, sports equipment, electronic or electronic cable, or machining system. Incorporation of mechanically unstable second material within the pores of a relatively stable material provides a material with outstanding damping properties with negligible cold flow. In the EMBODIMENTS the porous material can be ceramic, glass, metal or, particularly, polytetrafluoroethylene. The second material can be epoxy, fluorocarbon, polyurethane, acrylic, silicone, polyisobutylene or, particularly, oligomeric perfluorocarbon or uncured novolak epoxy resin. The figure shows the damping material porous material 1 unstable damping material.

Original Publication Data by Authority

# Original Abstracts:

A new composite damping material is presented which exhibits an enhanced ability to dampen mechanical oscillations. The enhanced damping properties of this material are achieved through the entrapment of highly viscous damping fluids within the pores of a porous material (such as: an expanded polymer, felt, foam, fabric, metal, etc.). The entrapment of the fluid...

- ...composite which may be shaped into useful articles. Such a construct allows utilization of the high performance damping properties of fluids which, in pure form, are too fluid-like for most practical applications (which typically require a solid, stable, material). This composite, possessing damping performance approaching that of certain fluids, combined with stability in a solid form, can be used in many applications...
- ...which produce noise or degrade performance in airplanes, automobiles, space structures, machine tools, sporting goods, **disk drive** components and **assemblies**, **electrical** /electronic components such as transformers, electrical cables, etc. In addition, these composites may be used...
- ...A new composite damping material is presented which exhibits an enhanced ability to dampen mechanical oscillations. The enhanced damping properties of this material are achieved through the entrapment of highly viscous damping fluids within the pores of a porous material ( such as: an expanded polymer, felt, foam, fabric, metal, etc.). The entrapment of the fluid within the porous...
- ...be shaped into useful articles. Such a construct allows utilization of the high performance damping properties of fluids which, in pure form, are too fluid-like for most practical applications (which typically require a solid, stable, material). This composite, possessing damping performance approaching that of certain fluids, combined with stability in a solid form, can be used in many applications where materials are needed to...
- ...or degrade performance in airplanes, automobiles, space structures, machine tools, sporting goods, disk drive components and assemblies electrical/electronic components such as transformers, electrical

cables, etc. In addition, these composites may be used to alter or tune the

- ...A new composite damping material is presented which exhibits an enhanced ability to dampen mechanical oscillations. The enhanced damping properties of this material are achieved through the entrapment of highly viscous damping fluids within the pores of a porous material (such as: an expanded polymer, felt, foam, fabric, metal, etc.). The entrapment of the fluid within the porous scaffold prevents flow...
- ...be shaped into useful articles. Such a construct allows utilization of the high performance damping properties of fluids which, in pure form, are too fluid-like for most practical applications (which typically require a solid, stable, material). This composite, possessing damping performance approaching that of certain fluids, combined with stability in a solid form, can be used in many applications where materials are needed to damp the vibration of mechanical...
- ...or degrade performance in airplanes, automobiles, space structures, machine tools, sporting goods, disk drive components and assemblies, electrical/electronic components such as transformers, electrical cables, etc. In addition, these composites may be used to alter or tune the mechanical response of a variety...

  Claims:
- ...A composite damping material comprised of:a) a porous material, and at least one second material having a mechanical droop time, as defined by test method 3, of less then 104 seconds,</br>said second material being within the pores of said porous material...
- ... A composite damping material comprised of:a) a porous material, andb) at least one second material having a...
- ...curve value greater than 1x109 dyne/cm2 at at least one point within the frequency band between 0.1 and 105 Hz.

36/3,K/5 (Item 5 from file: 350) DIALOG(R)File 350:Derwent WPIX

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0005713818 - Drawing available WPI ACC NO: 1991-327404/199145

XRAM Acc No: C1991-141397 XRPX Acc No: N1991-250778

GRP reinforced rubber couplings between coaxial drive clutch plates - to dampen transfer of vibration along drive train

Patent Assignee: HUTCHINSON (HUTC).

Inventor: SIMON J; SIMON J M

Patent Family (5 patents, 10 countries)

Application Patent Number Kind Date Number Kind Date Update A 19911106 EP 1991401151 A 19910430 199145 B EP 455556 19911108 FR 19905666 A 19900504 199204 E 19930518 US 1991694976 A 19910506 199321 E A 19911108 FR 19905666 FR 2661720 US 5211606 Α B1 19940601 EP 1991401151 A 19910430 199421 E EP 455556 DE 69102200  $\mathbf{E}$ 19940707 DE 69102200 A 19910430 199427 E EP 1991401151 A 19910430

Priority Applications (no., kind, date): FR 19905666 A 19900504

## Patent Details

Number Kind Lan Pg Dwg Filing Notes

EP 455556 A EN

Regional Designated States, Original: BE DE ES GB IT LU NL SE

US 5211606 A EN 6 4 EP 455556 B1 FR 8 4

Regional Designated States, Original: BE DE ES GB IT LU NL SE DE 69102200 E DE Application EP 1991401151

Based on OPI patent EP 455556

GRP reinforced rubber couplings between coaxial drive clutch plates...

Alerting Abstract ...body (6) within which are strips (3, 4) of a material having a relatively high modulus of elasticity, positioned and oriented so that when power is transmitted from one flanking disc (1) to...

...is made of a butyl or EPDM (ethylene-propylene-dimer terpolymer) or SBR (styrene-butadiene) rubber. The amt. of relative angular displacement of the discs (1, 2) may be limited by...

Equivalent Alerting Abstract ... vibrations when drive torque is applied, and blade(s) of composite material with high relative modulus of elasticity w.r.t. the mass providing a progressive transmission of torque between discs by flexion...

Title Terms.../Index Terms/Additional Words: RUBBER;

Original Publication Data by Authority

## Original Abstracts:

...flexible coupling between two coaxial rotating discs, the driving disc being intended to turn the **driven disc** in one direction or the other in such a way that the transmission of the torque...

...that said elastic element consists essentially of a composite material 3 having a relatively high modulus of elasticity, connected to an elastic damping mass 6...

...A device for damped resilient coupling between two coaxial rotary discs, the driving disc driving the driven disc in rotation in one direction or in the other so that transmission of the drive torque may take

...element. The resilient element is formed essentially of a composite material (3) with relatively high modulus of elasticity, and is associated with a resilient damping mass (6). Claims:

...device between two rotating driving and driven discs (1, 2), coaxial and parallel, the driving disc being intended to drive the driven disc (2) in rotation in one direction or the other so that the driving torque can be transmitted progressively at least in one given angular range ...

...elastic torque-transmission member, consisting essentially of a composite material (3) with a relatively high modulus of elasticity, associated with an elastic damping body (6), characterised in that the said composite material (3) is in the form of at least one strip or an assembly of parallel strips...

...in such a way, between the corresponding supports (4, 5), fixed respectively to the driving disc (1) and the driven disc (2), that the transmission of the torque between these discs (1, 2) is achieved essentially by bending of the said strips, and the damping by...

...transmission of a drive torque between two coaxial and parallel rotary discs, the first rotary disc being a driving disc and the second rotary disc being a driven disc , said device comprising: a resilient damping mass, disposed between the discs, for providing damping of vibrations between the discs by shearing of said damping mass when the drive torque...

...disk; at least one blade formed of a composite material and having a relatively high modulus of elasticity with respect to said resilient damping mass, said blade being embedded in said resilient mass and providing a progressive transmission of the drive torque between the discs by a...

(Item 6 from file: 350) 36/3,K/6

DIALOG(R) File 350: Derwent WPIX

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0005694728 - Drawing available WPI ACC NO: 1991-307062/199142

XRPX Acc No: N1991-235304

Gas-blast power breaker - has mechanism for gas intake chamber connected to gas exhaust space when gas pressure in gas cylinder exceeds set value

NoAbstract Dwg 1/11

Patent Assignee: CLARION CO LTD (CLAQ); HITACHI LTD (HITA)

Inventor: KOBAYASHI S; KOYANAGI O; SEKI Y; TSUKUSHI M

Patent Family (2 patents, 2 countries)

Patent Application

Update Kind Date Kind Date Number Number A 19900108 199142 19910909 JP 1990552 JP 3205724 Α 19921006 US 1991640048 A 19910109 199243 E US 5152496 Α

Priority Applications (no., kind, date): JP 1990552 A 19900108; JP 1990552 A 19900110

#### Patent Details

Pg Dwg Filing Notes Kind Lan

12 11 EN

Alerting Abstract ... The recording and reproducing unit comprises: (A) a motor drives a disc recording medium; (b) a recording and reproducing head records information on the recording medium and...

...material comprises a metal, ceramics having rigidity. The second material comprises a resin, or hard rubber having high vibration damping capability...

36/3, K/7(Item 7 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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0005694721 - Drawing available WPI ACC NO: 1991-307055/199142 Related WPI Acc No: 1998-277516 XRPX Acc No: N1991-235297

Low-vacuum detector for vacuum circuit breaker - has zero-phase current transformer for detecting earth current in power cable due to discharge in

vacuum valve Dwg 1/13

Patent Assignee: FUJI ELECTRIC MFG CO LTD (FJIE) Inventor: IWAI H; SHIBATA K; SUZUKI N; USUI N; YAGI Y

Patent Family (1 patents, 1 countries) Patent Application

Kind Update Number Number Date Kind Date A 19891004 19910909 JP 1989259350 JP 3205716 Α

JP 199051053 A 19900302

Priority Applications (no., kind, date): JP 199051053 A 19900302

#### Patent Details

Number Pg Dwg Filing Notes Kind Lan JP 3205716 Α JA 5

Alerting Abstract ... The recording and reproducing unit comprises: (A) a motor drives a disc recording medium; (b) a recording and reproducing head records information on the recording medium and...

...material comprises a metal, ceramics having rigidity. The second material comprises a resin, or hard rubber having high vibration damping capability...

(Item 8 from file: 350) 36/3,K/8

DIALOG(R) File 350: Derwent WPIX

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0005694719 - Drawing available WPI ACC NO: 1991-307053/199142 Related WPI Acc No: 1991-018920

XRPX Acc No: N1991-235295; N1992-000014

Electrical switch with reversible interlock mechanism - has translator arranged below actuator and interlock providing reversing in same direction as reversing action of actuator

Patent Assignee: JIMBO DENKI KK (JIMB-N); JIMBO ELECTRIC CO L (JIMB-N);

JIMBO ELECTRIC CO LTD (JIMB-N)

Inventor: FUJIYOSHI S

Patent Family (3 patents, 3 countries)

Patent Number	Kind Date		Application Number	Kind	Date -	Update	
JP 3205714	A	19910909	JP 1989262143	Α	19891009	199142	В
			JP 1990161272	Α	19900621		
			JP 1990161772	Α	19900621		
US 5072086	Α	19911210	US 1990511426	Α	19900423	199201	E
KR 157406	B1	19981116	KR 19906186	Α	19900501	200030	E

Priority Applications (no., kind, date): JP 1989109109 A 19890501; JP 1989262143 A 19891009; JP 1990161772 A 19900621

Alerting Abstract ... The recording and reproducing unit comprises: (A) a motor drives a disc recording medium; (b) a recording and reproducing head records information on the recording medium and...

...material comprises a metal, ceramics having rigidity. The second material comprises a resin, or hard rubber having high vibration damping capability...

38/3,K/1 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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0011047935 - Drawing available WPI ACC NO: 2001-274668/200129

XRAM Acc No: C2001-083479 XRPX Acc No: N2001-196238

Elastic covering for paper machine rolls comprises a highly elastic outer

layer and an inner layer with a high damping factor

Patent Assignee: VOITH PAPER PATENT GMBH (VOIJ); VOITH SULZER

PAPIERTECHNIK PATENT GMBH (VOIJ)

Inventor: SOHL C

Patent Family (5 patents, 25 countries)
Patent Application
Number Find Date Number

Number	Kind	Date	Number	Kind	Date	Update	
DE 19951038	A1	20010426	DE 19951038	Α	19991022	200129	В
EP 1094154	<b>A2</b>	20010425	EP 2000115933	A	20000725	200131	E
US 6379290	B1	20020430	US 2000692324	Α	20001020	200235	E
EP 1094154	B1	20040929	EP 2000115933	Α	20000725	200464	E
DE 50007972	G	20041104	DE 50007972	A	20000725	200474	E
			EP 2000115933	Α	20000725		

Priority Applications (no., kind, date): DE 19951038 A 19991022 Patent Details

Number Kind Lan Pg Dwg Filing Notes

DE 19951038 A1 DE 5 2

EP 1094154 A2 DE

Regional Designated States, Original: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI

EP 1094154 B1 DE

Regional Designated States, Original: DE FI FR GB SE

DE 50007972 G DE Application EP 2000115933

Based on OPI patent EP 1094154

...paper machine rolls comprises a highly elastic outer layer and an inner layer with a high damping factor

...reinforced material. The outer layer (6), e.g. 8 mm thick, is a highly elastic material with a damping factor tan delta less than 0.02. The inner layer (5), e.g. 12 mm thick, is of a material with a high damping factor of tan delta greater than 0.05.

Original Publication Data by Authority

# Original Abstracts:

...matrix material with embedded fibers. The matrix material of the functional layer includes an elastic material with a damping factor of tan delta less than about 0.02 and the matrix material of the connecting material layer includes a damping with a damping factor of tan than about 0.05. The process includes forming an outer delta greater functional layer with an elastic matrix material having a damping factor of tan delta less than about 0.02 and embedded fibers, forming an inner connecting layer with a damping matrix material having a damping factor of tan delta greater than about 0.05 and embedded fibers, and coupling the outer functional layer to the hard core through the inner connecting layer to form an elastic covering layer on an outside of...

Claims:

...embedded therein, with the matrix material (3') of the functional layer

- (6) being a highly resilient material with a damping factor of tan delta < 0.02 and the matrix material (3) of the connection layer (5) being a highly damping material with a damping factor of tan delta > 0.05, with the damping factor being defined by the...
- ...E' and its imaginary portion E".

Rouleau destine...matrix material with embedded fibers, wherein said matrix material of said functional layer comprising an elastic material with a damping factor of tan delta less than about 0.02 and said matrix material of said connecting layer comprising a damping material with a damping factor of tan delta greater than about 0.05.

42/3,K/1 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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0013449142 - Drawing available WPI ACC NO: 2003-540405/200351 Related WPI Acc No: 2006-260934

XRPX Acc No: N2003-428603

Hard disk drive used in personal computer, has damper formed of viscoelastic material layer, and interposed between screw and cover plate

Patent Assignee: SAMSUNG ELECTRONICS CO LTD (SMSU)

Inventor: CHOA S; JOA S H; JOAH S H; SOHN J; SOHN J S; SON J S

Patent Family (4 patents, 2 countries)

Patent Application Number Kind Date Number Kind Date Update 200351 B US 20030048576 A1 20030313 US 2002175952 A 20020621 A 20010910 200353 E KR 2003021961 Α 20030315 KR 200155557 A 20010910 200458 E KR 429842 В 20040503 KR 200155557 200624 E US 7023657 B2 20060404 US 2002175952 A 20020621

Priority Applications (no., kind, date): KR 200155557 A 20010910; US 2002175952 A 20020621

#### Patent Details

Number Kind Lan Pg Dwg Filing Notes

US 20030048576 A1 EN 15 9

KR 429842 B KO Previously issued patent KR 2003021961

Hard disk drive used in personal computer, has damper formed of viscoelastic material layer, and interposed between screw...

# Original Titles:

Hard disk drive having a damper for reducing vibrations...

... Hard disk drive having a damper for reducing vibrations

Alerting Abstract USE - Hard disk drive used in personal computer (PC...

...from being transferred to the cover plate, thus reducing noises and improving performance of the  ${f hard}$   ${f disk}$   ${f drive}$  .

...vertical sectional view of the assembly structure of the housing and spindle motor of the hard disk drive .

Original Publication Data by Authority

#### Original Abstracts:

A hard disk drive having a vibration reducing damper is disclosed. The hard disk drive is provided with a damper which is interposed between a through hole provided at a cover plate and a...

...is preferable that the damper has a multi-layered structure in which at least one high stiffness layer has relatively higher stiffness and at least one low stiffness layer made of a viscoelastic material has relatively...

- ...generated by the spindle from being transferred to the cover plate, noises generated by the hard disk drive are reduced, and, in addition, since vibrations generated by the spindle motor are damped, disk fluttering is reduced...
- ...A hard disk drive having a vibration reducing damper is disclosed . The hard disk drive is provided with a damper which is interposed between a through hole provided at a cover plate and a screw joined to the upper...
- ...layer. It is preferable that the damper has a multi-layered structure in which at least one high stiffness layer has relatively higher stiffness and at least one low stiffness layer made of a viscoelastic material has relatively lower stiffness. With the above...
  ...generated by the spindle from being transferred to the cover plate, noises generated by the hard disk drive are reduced, and, in addition, since vibrations generated by the spindle motor are damped, disk fluttering is reduced.

What is claimed is:<b>1</b>. A hard disk drive comprising:a housing comprising a base plate and a cover plate provided with a through hole; a spindle motor comprising a shaft which is...

- ...What is claimed is:1. A hard disk drive comprising:a housing comprising a base plate and a cover plate provided with a through...
- ...a spindle motor comprising a shaft which is supported on the base plate and the upper end of which is joined to the cover plate by a screw inserted through the through hole...

42/3,K/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

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0010520522 - Drawing available WPI ACC NO: 2001-122036/200113

XRAM Acc No: C2001-035307 XRPX Acc No: N2001-089537

Actuator E-block for a rotary data storage device, e.g. hard disk drive, comprises an E-block body made of a reinforced metal matrix composite, and yoke and actuator arms made of solid material

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC).

Inventor: CHUNG G J; LINCOLN T R; PRATER W L

Patent Family (1 patents, 1 countries)

Patent Application

 Number
 Kind
 Date
 Number
 Kind
 Date
 Update

 US 6151198
 A 20001121
 US 1998193879
 A 19981118
 200113
 B

Priority Applications (no., kind, date): US 1998193879 A 19981118

#### Patent Details

Claims:

Number Kind Lan Pg Dwg Filing Notes US 6151198 A EN 9 8

Actuator E-block for a rotary data storage device, e.g. hard disk drive, comprises an E-block body made of a reinforced metal matrix composite, and yoke and...

Alerting Abstract ... USE - Used for a rotary data storage device e.g. hard disk drive .

...lightweight with reduced fabrication complexity. It has a near net shape, low rotational inertia, enhanced damping and high stiffness. It is electroconductive and does not require grounding pins during manufacture. It has better dimensional

Original Publication Data by Authority

# Claims:

<b>Claim 12.</b> A method for creating an actuator E-block for a hard
disk drive, comprising:(a) fabricating a yoke and a plurality of
actuator arms from a solid material;(b) inserting the...